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JUN 26 1961
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Pregnant Idea for Our Industry: An Air Conditioning Sales Academy

(Conscience of the Industry Editorial
By George F. Taubeneck)

RECENTLY a Buick dealer, who resides just two doors down the street from us, went broke. In all the years that we have known this man, he never suggested even a demonstration ride in one of the shiny new cars he drove home every night.

He had seen Chevrolets, Plymouths, Oldsmobiles, and even a Cadillac — of various vintages — on our driveway down through the 20 years we've been neighbors. Yet not once did he attempt to sell us a Buick.

Come to think of it, nobody ever tried to sell us air conditioning, either. This situation isn't abnormal; it's the norm. Everywhere.

George Jones, managing director of ARI (and one of

(Continued on page 20)

Miami Area Reports Show First Quarter 40% Above Last Year

By Phil B. Redeker

MIAMI, Fla.—An analysis of 1960 sales, and a report on first quarter sales for 1961, for the Dade County (Miami) area, issued this month by Florida Power & Light Co., may be indicative of some sales trends in air conditioning in the past 18 months, particularly in the southern part of the nation.

First, as an encouraging note, sales of air conditioning in Dade County in the first quarter of this year were running 40% ahead of the same period in 1960, says R. S. Bostwick, sales manager for Florida Power & Light Co. in the Miami area. Continued warmer - than - usual weather in the late Spring, together with general improvement in certain parts of Miami's over-all business situation, should keep the sales picture on the improving side, it is believed.

The power company's analysis of 1960 sales reveals that total tonnage of air conditioning sold in the area was 58,426 tons, a substantial decrease from the 67,527 tons sold in 1959, and the record 70,659 tons reported in 1958. However, the 1960 total was the third best in history.

Significant in the 1960 sales analysis, however, is the continued growth shown by central package residential air conditioners. As shown in Figs. 1 and 2, while total tonnage was down in 1960, residential sales moved sharply upward last year to set a new high in sales for such equipment.

Another significant element in the 1960 figures is the generally agreed upon estimate that at least 55% of all residential tonnage installed is in heat pump systems. There are some who will argue somewhat heatedly that this percentage is possibly even greater.

While Miami could hardly be called a typical southern metropolitan area, what happened in the air conditioning business

(Continued on Page 21, Col. 1)

ARI Certification Set for Heat Pumps

WASHINGTON, D. C. — An ARI certification program for unitary heat pumps will be initiated as soon as test equipment can be installed and contracts and other preliminary details are completed, it was announced by John A. Gilbreath, chairman of the Unitary Air-Conditioner Section of the Air-Conditioning & Refrigeration Insti-

(Continued on Page 35, Col. 3)

Propose Voluntary Standards For Frozen Food Handling

COLORADO SPRINGS, Colo. — A joint five-year program with the major objective of "further advancing handling standards in the frozen food industry and thereby speeding the growth of the broadest possible customer acceptance" was announced here by the Frozen Foods All-Industry Coordinating Committee.

Major facets of the program include "immediate promulgation of voluntary operating practices throughout the industry, progressively tightened throughout the next five years; indoctrination of employes at all levels to understand the importance and proper techniques of maintaining product quality; and encouragement of the development and use of better and more efficient equipment."

The development of the industry's goals, it was stated, "is based on the principle that voluntary action undertaken by industry members will result in greater as well as more rapid improvement in handling practices than would be produced by the use of force through compulsory laws and regulations."

In announcing the program, Dr. H. C. Diehl, FFAICC chairman, said the Voluntary Operating Practices "are, in essence, a time table with which we hope to lead our industry, by stages, from the present plateau of public acceptance to a decidedly higher level by 1965.

"They are realistic in that they take into account the fact that a very heavy investment in equipment now in use was made before much of the newer and better equipment became available. They also were written with the knowledge that many

(Continued on Page 26, Col. 1)

NLRB Won't Narrow Use Of Secondary Boycott Law

WASHINGTON, D. C. — Because a firm subject to a secondary boycott is too small to come under the jurisdiction of the National Labor Relations Board is no reason to exclude it from the protection of the Landrum-Griffin law's ban on secondary boycotts, NLRB ruled recently.

On that reasoning, the board overruled a trial examiner who had held that the law was not violated when Local 299 of the

(Continued on Page 35, Col. 4)

NAPC Rejects Cooling In Name; Separate Contract Fight Gains

By Phil B. Redeker and George M. Hanning

DETROIT—Once again, the National Association of Plumbing Contractors has rejected attempts to expand its name and membership to include cooling.

A resolution presented at the national convention here by Washington state contractors to broaden the objectives of the association to include heating and cooling and to permit the inclusion of heating and cooling contractors in the membership was rejected without dissent.

So was a resolution by Louisiana contractors to change the name of the association to "National Association of Plumbing-Heating-Cooling Contractors."

Says House Bill 723 Buried In Committee

Other highlights of the four-day convention staged in Cobo Hall here, along with an exposition of plumbing, some heating, and a few cooling products, were:

The fight in behalf of the separate mechanical contract idea is apparently gaining, according to reports from various sources. President Peter T. Schoemann of the United Association declared that House Bill 723 which would promote the single contract policy on Federal contracts is buried in a Congressional subcommittee. Expected soon: a meeting of subcontractor groups to promote the fight for the separate contract in both public and private construction at the local level.

UA Opposes Intrusion of Plumbing on Other Trades

From the remarks of Schoemann, who is general president, United Association of Journeymen & Apprentices of the Plumbing & Pipe Fitting Industry:

"We favor plumbing codes. We are not seeking the repeal, or urging our local unions to seek the repeal, of any state or local plumbing code. . . .

"We do oppose attempts to modify existing codes, or to secure the enactment of new ones, containing a definition of plumbing which we consider to intrude upon other branches of the industry, and to take work away from our members who follow a branch of the trade other than plumbing.

"At the same time, we place no obstacle whatever in the way of contractors operating what are known as mixed shops.

". . . We have seen a U.S. Labor Dept. draft describing the occupation of the 'heating, refrigeration, and air conditioning technician.'

"This mythical character, unknown in long-established indus-

(Continued on Back Page, Col. 1)

Inside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

How to Forecast Air Conditioning Sales

You, sir, probably are a much better weather prophet than you think!

Your moods and physical sensations actually can predict what temperatures and humidities will ensue in a given time.

If you live in a rural area, likely you learned long ago to be your own weatherman by noting the restless behavior of livestock and animal pets which occurs prior to a storm.

Doctors tell us that rheumatism or bursitis sufferers are so sensitive to barometric pressure changes that they can forecast local weather futures better than trained experts.

And there is more fact than fancy in ancient folk observations such as "Red sky in the morning, sailor take warning," or "Beware of the old moon in the arms of the new."

Chances are, though, that your outlook is "cloudy" when it comes to genuine knowledge of the enormous range of weather forecasting techniques —from elemental aches and pains to the modern electronic wizardry which produces weather maps.

Around the World

Ancient Hebrews were conned into believing drought would occur if they didn't pay their taxes.

In India, it was thought that frogs and snakes had the power to bring rain. And if you kill a

(Continued on Page 16, Col. 1)

New President

ELECTION of Curtis T. Roff as president of Anemostat Corp. of America, subsidiary of Dynamics Corp. of America and a major producer of air diffusers and other air conditioning equipment, has been announced by DCA President R. F. Kelley. Roff had been Anemostat vice president in charge of production and engineering.

Edward Haines Named Stanley Works V. P.

NEW BRITAIN, Conn.—Edward M. Haines, formerly vice president and assistant to the president of York Div., Borg-Warner Corp., has been elected vice president in charge of engineering for The Stanley Works, it was announced by Howard L. Richardson, president.

AAF Betters Earnings, Shipments, Backlog

LOUISVILLE, Ky. — American Air Filter Co. improved its shipments, earnings, and backlog of orders during the first six months of its fiscal year, which ended April 30.

President W. G. Frank reported that shipments for the first six months totaled $19,917,000 as compared with $19,386,000 for the same period last year. The backlog of unfilled orders at the end of the six months' period was $13,500,000, an increase of $1,100,000 over the year before.

AAF earned 74 cents per share of common stock for the six months, compared with 47 cents per share for the same period in 1960. Consolidated net earnings for the first six months after taxes were $676,000, according to the report.

School Cooling Gets Attention of Educators

DETROIT — The subject of school air conditioning is attracting the attention of an increasing number of educators around the country, newspaper and other reports indicate.

In a front-page story on the market for school equipment, the *Wall Street Journal* stated that many educators are interested in promoting the "thermal environment" of learning.

"As a result," the *Journal* said, "air conditioning is considered less of a frill. Moreover, there is interest in building square-shaped schools, with windowless interior rooms. Even though this makes air conditioning essential, over-all construction costs are often lowered, contend school administrators."

Carrier Air Conditioning Co. is quoted as saying that only 6,000 classrooms in elementary and high schools are now air conditioned, less than 1% of the total. The company predicts, however, that by 1965, 26,000 non-college classrooms will be air conditioned.

A Carrier spokesman told the *Journal* that in the colleges, about 5,000 of some 61,000 classrooms are now air conditioned and interest is quickening in providing more.

Columbia, S. C.

In Columbia, S. C., it was reported that the city school board recently discussed the feasibility and economics of building a completely air conditioned junior high school.

Architect H. M. Fair and Engineer Marcus Durlach presented a report to the board on two Florida schools of identical proportions, one designed conventionally and the other designed specifically for air conditioning.

They said the air conditioned school was build at a slight savings over the conventional building. According to Fair, an air conditioned school in Columbia probably would cost 10% more than a conventional school offering similar facilities.

The Columbia school board has retained Lafaye, Fair, Lafaye Associates, architect, to design a new junior high school for the Pine Belt Road area.

The board instructed Fair to continue preliminary studies as to the practicality and costs involved in designing this particular school for air conditioning, prior to a meeting with a representative of the firm of educational consultants which serves the Columbia schools.

Supt. Guy L. Varn told the board there is a national trend toward lengthening the school year. He said enrollment in summer school in Columbia is steadily increasing. Air conditioned schools will be common throughout the South in not too many years, he predicted.

New Orleans

Earlier this year, New Orleans Public Service reported in its publication "Profit" that one of the points developed during a panel discussion at a local ASHRAE meeting was that the next decade should see all new school construction fully air conditioned. Other points: Research shows that comfortable, cool classrooms should increase learning approximately 10%. The cost of operating the air conditioning will be offset by savings in building construction and through compact design.

The economies of air conditioning of public schools and the value of air conditioning as an aid to student learning were brought out in discussing a new high school now being built in Terrebonne Parish. The school will be totally air conditioned.

Portland, Ore.

Also earlier this year, the *Sunday Oregonian* in Portland reported on plans for an eight-room unit of the new Heppner-Lexington High school at Heppner. Building plans presented by Stewart Tuft of Hayslip & Tuft, Portland architects, called for year-round air conditioning by heat pumps.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Jessup To Become Manufacturers' Agent

DANVILLE, Ill. — Donald J. Jessup has resigned as sales manager for the Refrigeration Dept. of the Danville Div., Bohn Aluminum & Brass Corp.

He is going into business as a manufacturers' agent and Bohn refrigeration products make up one of his lines. His area for representing Bohn will be northern Illinois, Indiana, and eastern Kentucky.

THROW YOUR COMPRESSOR *OUT!

*OUTSIDE, THAT IS!

KRAMER'S outdoor compressor is the only compressor designed to operate outdoors for any application under all temperatures and weather conditions.

Completely assembled, wired, tested and factory run-in, it arrives on the job ready to operate. Simple hookup eliminates costly installation and control adjustment time. Kramer's outdoor compressor ends waste of valuable indoor space.

WRITE FOR BULLETIN

KRAMER OUTDOOR COMPRESSOR

KRAMER TRENTON CO. • Trenton 5, N. J.

46 YEARS OF CONTINUOUS ACHIEVEMENT IN HEAT TRANSFER

SOUND WAVES COOL

the motor windings of new General Electric 8 and 10 ton compressors! Now, G.E. marks another major advance in air conditioning with ACOUSTI-COOL—a dramatic innovation in compressor design. ACOUSTI-COOL actually uses the higher frequency sound waves in the compressor to help cool the motor windings—and longer life, of course, goes hand-in-hand with cooler motors. **New compact 8 and 10 ton units made possible.** This new principle has enabled G.E. to develop 4-cylinder compressors so compact that they'd each fit into a five gallon paint can. And these compressors are the heart of G-E's all-new 8 and 10 ton units—units that open an expanded and profitable market for you in terms of commercial, industrial and large residential installations. Get the complete facts on ACOUSTI-COOL . . . and on the new G-E 8 and 10 ton units. Contact your nearest G-E distributor, or write: General Electric Company, Air Conditioning Department, Tyler, Texas.

GENERAL ELECTRIC
Air Conditioning Dept.
Tyler, Texas

Home Cooling Sales for June 10 Week Best of Season In Dallas-Ft. Worth

Central residential air conditioning unit sales in the Dallas-Ft. Worth area for the week ended June 10 were at the best weekly level since early in May, according to reports made by air conditioning dealer-contractors.

Sale of unitary air conditioners for commercial applications showed a dip in number from the preceding week, but was better than the figure for any preceding week back into early April. Also, the total tonnage on these commercial jobs was far greater than that recorded for any preceding week other than the one ending June 3.

This resume of sales in the Dallas-Ft. Worth area was made possible through figures submitted by Texas Electric Service Co., Ft. Worth Div.; and Dallas Power & Light Co.

RESIDENTIAL

Week (Ends)	No. Jobs	Total Tons
June 10	82	420.5

COMMERCIAL AND INDUSTRIAL

Week (Ends)	No. Jobs	Total Tons
June 10	13	493

Williams In GAMA Post

COLUMBUS, Ohio—T. J. Williams, manager, marketing administrative services, Janitrol Heating & Air Conditioning, has been named chairman of the Marketing Research Board, Gas Appliance Manufacturers Association, it was announced here.

Sandness Heads Delco Advertising

DAYTON—The promotion of Arnold C. Sandness to the newly-created position of manager of advertising and marketing, Delco Products Div., General Motors Corp., has been announced by W. J. Wagner, division general sales manager.

A. C. Sandness

This assignment will include responsibility for the division's advertising, merchandising, sales promotion, market studies, and sales forecasting.

Sandness joined Delco Products in 1954. He has had assignments as sales application engineer, sales office manager, and marketing research analyst.

Third 'Genetron' Plant Begins Production To Serve Northeast

ELIZABETH, N. J. — Allied Chemical's General Chemical Div. recently announced production of "Genetron" fluorinated hydrocarbon refrigerants and aerosol propellants from a new multi-million dollar plant located at its Elizabeth Works.

With a capacity well in excess of 10,000 tons per year, this plant marks General Chemical's third "Genetron" producing facility. It will supply customer requirements in the northeast. The two other "Genetron" plants are in Baton Rouge, La., and Danville, Ill.

Initial products now in production at Elizabeth are the three primary refrigerants and aerosol propellants: "Genetron" 12, 11, and 22.

General Chemical formerly supplied northeastern customers with these products together with "Genetron" 114 from bulk storage facilities at Elizabeth, which, in turn, were stocked with "Genetrons" produced at Baton Rouge. "Genetron" 114 will continue to be supplied in this manner as will mixtures of "Genetrons" 114 and 12.

Air Conditioner Volume Up In Florida, Kansas

DETROIT—Reports on April sales of air conditioners in the territories served by Florida Power & Light Co., Miami, and Kansas Gas & Electric Co., Wichita, show that volume continued to run ahead of year-ago levels.

In the FPL area, air conditioner sales in April were 8% ahead of April, 1960, totaling 4,282 compared with 3,965. For the four months of this year, air conditioners topped the list of year-to-date appliance leaders with a gain of 41%. Sales rose to 15,964 from 11,304 in the January-April period of last year.

The FPL report shows unit sales to retail dealers as reported by state wholesalers, and sales by department and chain stores and some retailers who purchase their merchandise from sources other than state wholesalers.

Kansas Gas & Electric reported that retailers in its territory sold 376 room air conditioners in April, against 233 a year earlier. For the first four months of this year, sales totaled 631 compared to 468 in the like 1960 period, a gain of 34.8%.

Central system air conditioner sales in the KG&E area rose to 66 from 16 in April, 1960. This boosted sales for the January-April period to 167 from 93 in the corresponding period of last year, an increase of 79.6%.

D. M. Lawson Named Steveco Gen. Manager

ATLANTA — David M. Lawson has been named vice president and general manager for Steveco, it was announced by Mrs. O. E. Stevens, president of B & F Stevens, Inc., owner of Steveco.

D. M. Lawson

Lawson has been district manager for Sporlan Valve Co. in the southeast for the past 13 years. He replaces Fred R. Stevens.

Steveco distributes fractional horsepower shaded pole motors, manufactured by General Electric, throughout the United States, Canada, and Mexico. Sales are made to refrigeration and air conditioning wholesalers, electric motor repair shops, and O.E.M. accounts.

"Our Yellow Pages advertising brought us a $20,000 sale!"

says Bernard B. Fow, Pres., Airko Service & Supply Co., Miami, Florida

Display ad (reduced) runs under AIR CONDITIONING EQUIPMENT & SUPPLIES. Call the Yellow Pages man at your Bell Telephone Business Office to plan your business-building program.

"That $20,000 sale, a 45-ton air conditioner, is one of many orders I got through the Yellow Pages."

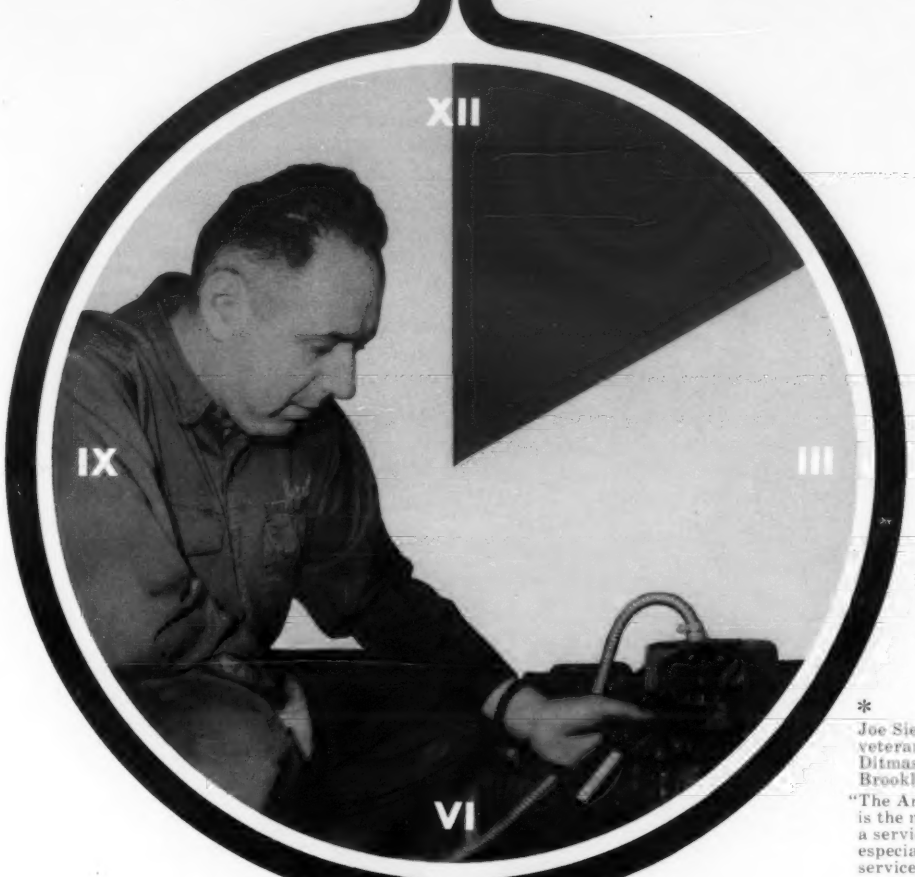
"When I started in business 14 years ago, my Yellow Pages display ad really helped me get established."

"Today, I cover a wide selling area with my advertising in four different Yellow Pages directories."

"Because the Yellow Pages does such a good job for me, it gets about half my advertising appropriation."

Find Us Fast In The Yellow Pages

Display this emblem. It builds your business!



*
Joe Siegel,
veteran serviceman,
Ditmas Refrigeration Co.,
Brooklyn, New York.

"The Amprobe RS-3 is the most useful tool a serviceman can carry – especially during peak service periods. It saves me an average of 30 minutes a job which, I figure, allows me to make an extra call a day. And at that rate, the RS-3 *pays* for itself in a week from 'found money!' Follow me through a typical day. I'll prove it."

"Amprobe saves me two hours a day!"*

Call No. 1: Condensing unit on chest-type freezer defrosts. Fan runs, but unit won't start. Discovered motor starting resistance only 1.5 ohms, while running resistance was 5 ohms. Starting resistance should be at least 20% greater than the running, therefore windings defective. Without RS-3, I'd need sealed-unit starter kit and capacitor for power source to try to start head. If it could start, I'd have to take current readings; if it couldn't, I'd have to yank the head. **Time saved: 30 minutes.**

Call No. 2: Air conditioner not running. Amprobe showed input voltage okay. Keeping unit running manually from contactor, used RS-3 to check running current. Found it normal. Using RS-3 as ohmmeter, I located an open relay. **Time saved: 40 minutes.**

Call No. 3: Supermarket freezer not getting cold. Using Amprobe as ohmmeter, I found leads to heater element were carrying current even though time clock was off defrost cycle. Continuity check on clock switch: okay. Tested heater leads and located a ground. **Time saved: 25 minutes.**

Call No. 4: Freezer running warm. Check disclosed that system in defrost. Decided that defrost thermostat at fault. Made sure (replacement is a big job) by measuring resistance of disconnected line to thermostat. Would have had to run live leads to hard-to-reach thermostat if not for Amprobe RS-3. **Time saved: 25 minutes.**

The total time saved in one day: 2 hours!

■ **14-DAY FREE TRIAL PLAN** ■ Try the RS-3 for two weeks under no obligation. If you're not completely satisfied, return it, and get your money back in full. Ask your distributor for complete details on the RS-3 and other time-saving Amprobe instruments. And for the full Joe Siegel story, write today for Reprint A616 to Pyramid Instrument Corp., Lynbrook, N.Y. Canada: Atlas Radio Corp., Toronto, Ont. Britain: H. J. Baldwin Co., Ltd., London, England.

P

Only **$52.50** (slightly higher outside U.S.)

Announcing the newest addition to the Amprobe family

NOW

TEST VOLTS AMPS AND

OHMS

FOR ONLY $29.85

You read right. The AMPROBE JR. *Testmaster Kit* lets you *read* voltage on a calibrated scale (not just an indication), measure amps *without* interrupting service *and* test for resistance...at half the price you'd expect to pay for a tool of similar versatility

The Kit consists of the AMPROBE JR., an ohmmeter attachment, test leads, a leather carrying case and the AMPROBE *Energizer* ("splits" double-conductor cords for direct readings at outlets, or boosts the sensitivity of the instrument 10X for readings on fractional h.p. motors).

Pick the range that best fits your job from six rugged, lightweight models: 0-25 to 0-100 amp; either 0-125/150 or 0-150/600 volts AC; 25 ohms mid-scale. For more details about this newest addition to the most-complete family of pocket-sized, snap-around test instruments in the world, see your Distributor or write for Catalog sheet AAD-1.

PYRAMID INSTRUMENT CORP., LYNBROOK, N. Y.

Canada: Atlas Radio Corp., 50 Wingold Ave., Toronto.

"Here's why I'm switching to H&M central system air conditioners

. . . I can get just the fin spacing, tonnage and CFM I want."

Now, Halstead & Mitchell gives you a choice of 6, 7, 8 or 10 fins per inch . . . makes it much easier to match a central fan-coil unit to a particular job or to meet specifications.

And look what else H&M offers: a selection of three coil face areas for each model; direct expansion or chilled water cooling coils (1 to 8 rows); hot water, standard steam or non-freeze steam heating coils (1 or 2 rows); cooling capacities of 3 to 92 nominal tons with 880 to 47,750 CFM; Turbu-Flo coils arranged for right or left-hand connections; horizontal or vertical mounting for discharge in any direction . . . and every accessory item you need to simplify your installation.

Why don't you check H&M Central System Air Conditioners? Call your wholesaler or write for Bulletin AHU-100. Halstead & Mitchell Co., Dept. H64 Bessemer Bldg., Pittsburgh 22, Pa.

Central System Air Conditioners · Air-Cooled Condensers · Cooling Towers · Water-Cooled Condensers

Export Representatives: Sabal-Kielmann, 15 Williams St., New York 5, N. Y.

AH SERIES
AIR HANDLER

HM
Halstead & Mitchell

3 Sales Teams Hold 44 Meetings In Month

Iron Fireman Unleashes 3-Pronged 'Blitz'

CLEVELAND—Iron Fireman Mfg. Co.'s Heating & Air Conditioning Div. here recently unleashed a three-pronged "sales blitz."

This sales drive—of less than a month's duration—involved:

Three sales teams from headquarters here moving across the nation simultaneously; 44 separate meetings before Iron Fireman dealers and prospective dealers.

The "blitz" was a big departure from the division's tradition. Heretofore, it has sent out only one sales team each spring—to dealer meetings in about 15 cities. Here, roughly, is how this year's "sales blitz" worked:

One team, led by General Sales Manager Howard M. Cutshaw, set out across country to re-stimulate greater goals and techniques on the company's "Custom Mark II" residential furnaces and boilers.

Hard on the heels of this team came a second sales force—this one centering about the division's commercial-industrial heating and power equipment and its "IronFirepak" line of package generators, and led by S. H. Beach, commercial-industrial sales manager, and Gilbert Nelligann, package generator sales manager.

In addition, a third team was also on the move—at the same time. This one, directed by Marketing Manager Warren Blanke, focused its attention on fuel dealers and heating and plumbing contractors who are not now part of Iron Fireman's organization. The objective of "Blanke & Co.": persuade these dealers and contractors to join the marketing push behind the Custom Mark II equipment.

Blanke's team covered many of the cities covered by the other two teams—and some they didn't cover.

All told, the "sales blitz" ranged from New England through Charlotte, N. C. in the South and out West and up North as far as Fargo, N. D.

Earlier, 61 district sales managers and field engineers attended a week-long sales kick-off.

Theme of the meeting was "Iron Fireman Steps Out in '61." Some of the ways in which the division will "step out" were outlined by Cutshaw as:

Substantial increases in selling manpower—plus stepped-up dealer advertising and promotion; greater stress on the new "Gold Mine Campaign"; renewed emphasis on the Custom Mark II furnace and boiler; more vigor in "pushing" its package generator line.

Cutshaw said new dealer salesmen and more dealers and distributors will be added—in large numbers. More is going to be done too, he added, in persuading present dealers to accentuate Iron Fireman lines.

The "Gold Mine Campaign"—keyed to the replacement market for commercial light oil burners—has been strengthened, Cutshaw said, by the addition of two more "Whirl-Power" burners, the CF-100 and the MF-65. These newly-designed forced draft burners, with a range of .75 to 30 gph, are designed as replacements for conventional gun-type light oil burners in commercial installations.

Cutshaw reminded his audience that "conversion work has always been far more profitable than new construction. The replacement market for commercial light oil burners is ready-made—and always there regardless of business conditions."

Franchised dealers will back up the "Gold Mine Campaign," Cutshaw noted, by personal contact, direct mail, and local newspaper and magazine advertising.

Turning to the Custom Mark II furnace and boiler, both of which are oil-fired, Cutshaw observed: "This is going to be our Number One product in 1961."

Regional Custom Mark II meetings aimed at potential oil equipment dealers and distributors will be intensified and increased, Cutshaw said. In addition, the division's successful drive to persuade oil companies to help promote the Custom Mark II will continue unabated, he said.

Cutshaw said that recent design changes in the Mark II furnace — including a corrugated heat exchanger in the horizontal series—have improved the market position of the Custom Mark II equipment.

In other announcements made at the meeting, Iron Fireman said it:

Plans to "fire up" dealer advertising and sales promotion by 50% this year.

Has added a model to its line of central air conditioners — bringing the line five sizes ranging from 22,000 Btuh through 82,000.

BUY SPORLAN *Catch-Alls*

. . . the Perfect Filter-Drier for every capacity
from fractional horse-power units to large capacity installations

Sporlan offers a complete range of Catch-Alls engineered to fit every application, from domestic refrigerators, small freezers and vending machines to the largest commercial and industrial refrigeration and air conditioning systems, with every conceivable job size in between.

No matter how large or small the job you are planning, your filter-drier worries stop when you buy Sporlan Catch-Alls.

In addition, the Sporlan Catch-All is the perfect filter-drier because . . .

- Desiccants are molded into a porous core.
- Maximum drying through highest degree of activation.
- Filtering instead of straining.
- Superior acid removal.
- Refrigerant cannot channel through or by-pass around the core.
- Core will not powder or pack.
- Full line flow protection for any size system.
- Connections are protected by moisture and tamper-proof seals.

See your Sporlan Wholesaler for your Catch-All needs today and ask him for a copy of Bulletin 40-10.

SPORLAN VALVE COMPANY
7525 SUSSEX AVENUE ST. LOUIS 17, MISSOURI

EXPORT DEPT. • 85 BROAD STREET • NEW YORK 4, N. Y.

California Has New Water Conditioning Contractor Class

SACRAMENTO, Calif.—After long consideration, a new classification for "Water Conditioning Contractors" has been established by the California Contractors' State License Board to be known as specialty contractor classification C-55.

Effective Aug. 22, the new classification has been defined as follows:

"A water conditioning contractor is a specialty contractor whose contracting business is the execution of contracts requiring the art, ability, experience, knowledge, science, and skill to install water conditioning equipment with the use of only such pipe and fittings as are necessary to connect the water conditioning equipment to the water supply system and to by-pass all those parts of the water supply system within the premises from which conditioned water is to be excluded. This classification excludes fixed works requiring specialized engineering knowledge and skill as provided in Section 7056 of the Business and Professions Code."

Phoenix Firm Now Under New Management

PHOENIX, Ariz. — Comfort Air Conditioning, Inc., here, is under the new management of Merrill Annis, as president of the firm, according to May 16 ownership transfer listings.

Transistors Replace Vacuum Tubes

Westerners See Electronic Control System

LOS ANGELES — Southern California news men were the first Westerners to experience interior temperature changes controlled electronically by a new system, called "Conditionaire," at a special press showing in the Biltmore hotel.

Some 400 builders, architects, engineers, and air conditioning experts were expected to view the temperature control system during its four-day West Coast debut.

John Keys, vice president, and William Burley, engineer, both from the Dallas office of Fischbach & Moore, Inc., manufacturer of the system, explained the electronic operation to members of the press.

They pointed out that Conditionaire incorporates the use of transistors, rather than vacuum tubes. This is claimed to increase reliability and performance. Power actuators are driven directly by the transistors, thereby eliminating relays.

Keys and Burley also showed how Conditionaire modules permit tailoring of the system to individual requirements of buildings. The desired control function is effected simply by plugging the necessary combination of modules into the central control unit, it was pointed out.

Viewers were invited to create difficult hypothetical situations requiring unusual temperature control. Conditionaire, in turn, met the challenges when demonstrators arranged the modules on the control panel, which has no internal wiring, according to the company.

Another feature is an entirely new circuit network which reportedly improves efficiency and lowers installation time and cost.

NEW ELECTRONIC temperature control system, the "Conditionaire," is demonstrated for the first time on the West Coast by William Burley (left) of Fischbach & Moore, Inc., manufacturer of the unit. F. S. Kellstrom (right), the company's western region vice president, greeted guests during a special showing in Los Angeles.

Atlanta Building Gets Central System for Each of 3 Floors

ATLANTA — A central air conditioning system for each floor will be a feature of the three-story Firemen's Fund Insurance Co. building, under construction here.

The triple installation is intended to permit better temperature control than would be possible if a single air conditioning system served the entire building, according to a report by National Supply Div., Armco Steel Corp.

Electrical heating for the building is provided by the use of 250 kw of heaters in the air conditioning ducts, supplemented by 144 individual electric heaters, for a total capacity of 280 kw.

Scheduled for completion in July, the building will provide 66,000 sq ft of floor space.

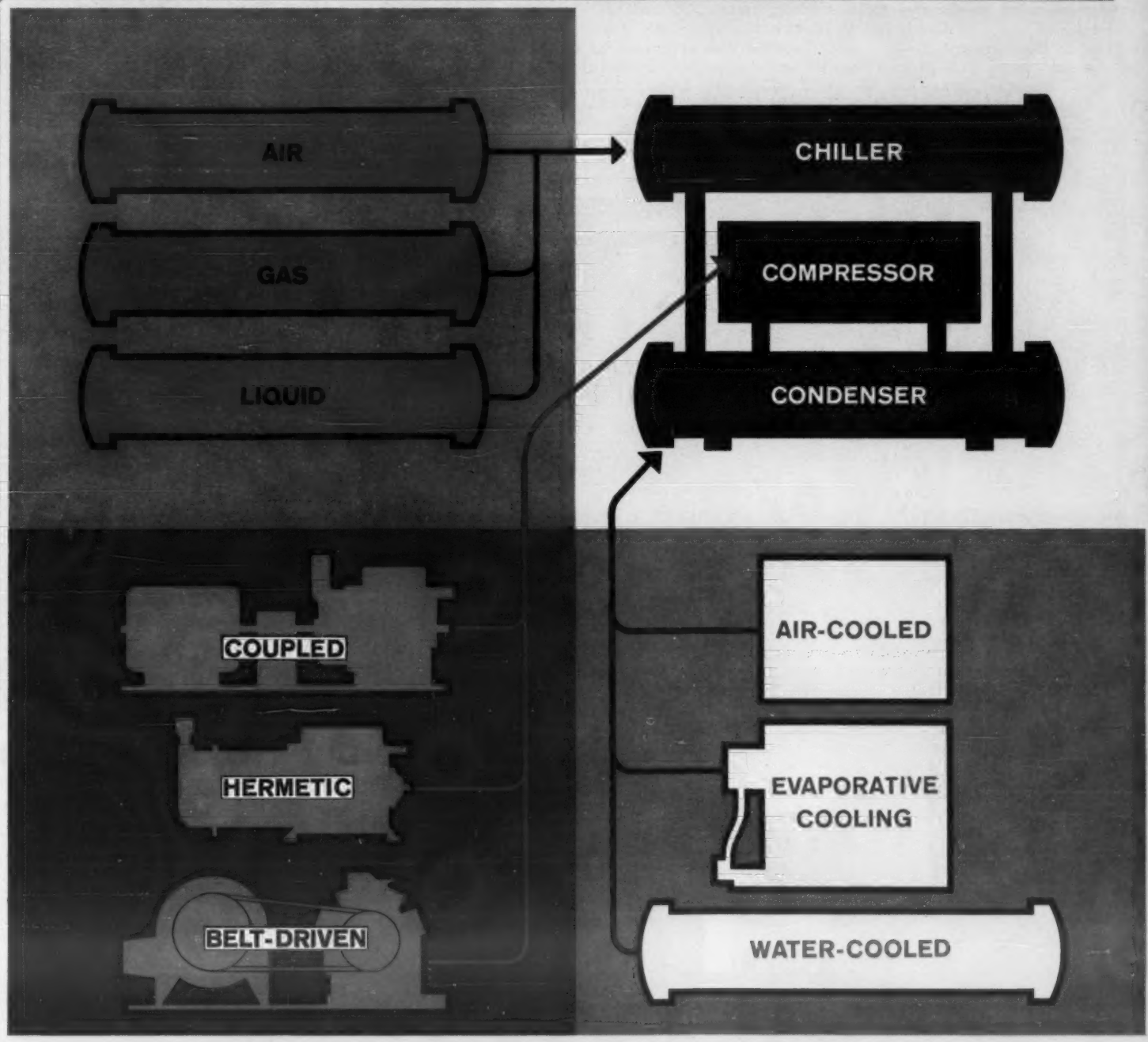
Saggus, Williamson, Vaught & Spiker is the architect. Newcomb & Boyd is the electrical engineer. The Fulton Brothers Electric Co. is the electrical contractor.

The 460-volt electrical system is designed for 1,600 amp, with provisions for 3,000 amp.

The wiring is carried in more than 29,000 ft of Spang conduit, manufactured by the National Supply Div. This includes 7,900 ft of Spang HD Galvanized Steel Conduit and 21,300 ft of "Spangleam" electrical metallic tubing.

REMCOR
Model CB-2A

WATER COOLER
5 Gallon Bottle Type
$89.50*
*TO DEALERS ONLY
. . . economical . . . efficient . . . streamlined . . . space-saving . . . ⅙ H.P. Tecumseh hermetic unit . . . five year warranty on refrigeration cycle. . . .
Remcor Products Co.
321 E. Grand Avenue,
Chicago 11, Illinois
manufacturers of water coolers since 1911
also available:
10 Gallon Pressure Type Cooler
*$139.50



"FULL CHOICE" IN CHILLERS

With Worthington you choose chillers with complete flexibility. Chill water for air conditioning, chill brine for process work, chill air for moisture removal. There is never any need for you to compromise job satisfaction when you specify Worthington "Full Choice" chillers.

The coolers are designed for equally efficient heat transfer rates for air and gases, as well as for the conventional liquids. You select the condenser cooling medium—water, air or evaporative cooling. And you have the option of hermetic, coupled or V-belt-driven compressors. Every compressor is from the Worthington V-line. There is no quieter running compressor available today.

Most important—each component is factory-protected for the service involved. Air chillers are complete with properly sized moisture separators and traps. All units are equipped with suction heat separators, to improve over-all efficiency and protect the compressor from damage from liquid slopover.

Standard, factory-installed protective devices include freeze-up switches, crankcase heaters, high-discharge temperature Klixons, pump-down relays, high-low pressure cut-outs and operating gages.

Hermetic compressors are protected additionally by filters, dryers, moisture indicators, low-pressure relief valves and against motor burnout. And, of course, belt-driven units include safety guards.

Result? Worthington's "full choice" of chillers assures you of a reliable, low cost system tailored exactly to your needs.

For full information, contact your nearest Worthington representative, or write Worthington Corporation, Air Conditioning Division, Section 12-46, East Orange, N. J. In Canada, Worthington (Canada) Ltd., Brantford, Ontario.

WORTHINGTON

PRODUCTS THAT WORK FOR YOUR PROFIT

G. H. Diehl, Jr.

H. A. Caldwell

P. G. Venable

C. Giurlando

Worthington Promotes Diehl, Caldwell, Venable, Giurlando

HARRISON, N. J. — Worthington Corp. announced the promotion of George H. Diehl, Jr., Henry A. Caldwell, Paul G. Venable, and A. Charles Giurlando at the Air Conditioning Div. in East Orange.

Diehl was named product sales manager, fans and fan coil units. He has served in several capacities at the Air Conditioning Div.

Caldwell has been named product sales manager, induction and dual-duct units. He was formerly manager, national account sales, New York office.

Venable was appointed product sales manager, transportation equipment, responsible for sales of the division's new truck refrigeration system and other transportation products now under development. He has been manager, national account sales, Air Conditioning Div.

Giurlando was appointed product engineer, responsible for all phases of engineering related to terminal units produced at the division's Decatur, Ala., plant. He has been concerned with air conditioning engineering.

McQuay To Pay Dividend Of 12½c for Quarter

MINNEAPOLIS — The directors of McQuay, Inc., have declared the regular quarterly dividend of 12½ cents per share, B. E. James, president, announced.

The dividend will be paid on the company's 418,932 outstanding shares of common stock and will be payable on July 1 to the stockholders of record June 19.

Hunter Names Broderick Motor Sales Manager

MEMPHIS — T. M. "Ted" Broderick has been named manager of motor sales for the Hunter Div., Robbins & Myers, Inc.

Broderick

Broderick, who left the Delco Products Div. of General Motors Corp. to accept the newly-created position, will be in charge of sales of fractional electric motors up to 1 hp. The motors are manufactured at R&M-Hunter's Memphis plant.

The company is expanding its motor production division and is establishing a special sales force to market its fractional motors.

Current Literature

Motel Heating, Cooling

POMPTON PLAINS, N. Y.—A new 17-in. by 21-in. broadside, describing in detail the Edwards way of heating and cooling motels, has been published by Edwards Engineering Corp. here. The Edwards packaged system is based on zoned hot water baseboard heating and zoned water chilled valance cooling with individual room temperature control. The manufacturer furnishes all components: boiler, baseboard radiation, zone valves, chiller, and valance cooling coils.

In the bulletin are schematic diagrams and complete specifications including the electrical wiring for the cooling and heating systems.

* * *

Industrial Fans

HYDE PARK, Mass.—A new series of industrial airfoil centrifugal fans for heavy duty applications is described in a catalog (1122) available from the Westinghouse Sturtevant Div., Dept. T-293, here.

The four-page publication discusses operating features, construction details, and engineering data on the Series 8500 fans that are tailored specifically for high efficiency performance at direct-connected motor speeds. The fans are available in capacities from 15,000 to 450,000 cfm.

* * *

Metalworking, Material Handling Equipment

CHICAGO — An introduction to the more than 3,800 types and models of metalworking and material handling equipment available from nationwide distributors is provided by a new 12-page brochure which illustrates and briefly describes the principal units according to kind of work performed.

Press brakes, punches, shears, bending rolls, threaders, saws, drill presses, welders, hoists, trolleys, and storage racks are among the machines and equipment covered in this bulletin 90-6, available from Joseph T. Ryerson & Son, Inc., Box 8000-A, Chicago 80, Ill.

* * *

Venting Problems

CHICAGO — Available to all who are interested in venting problems is a new bulletin describing corrosion-resistance of gas venting materials, according to the Gas Vent Institute, 333 N. Michigan Ave., Chicago 1, Ill.

Third in a series of bulletins dealing with safe, modern methods of gas vent installation, this bulletin describes the corrosion-resistance properties of double-wall gas vents and is intended to correct any misconceptions that exist on abilities of double-wall gas vents to withstand corrosion, the GVI said.

NEW DEVELOPMENTS FROM DU PONT:

Traveling assistants for burnout jobs

Here's a new, practical, more effective way to handle refrigeration system burnouts. Not just replacement, not just flushing . . . but *complete* pressure cleaning with Du Pont's new cleaning unit. This new unit utilizes Freon-11*, the most effective selective solvent available for oil, sludge and grease. By completely removing contaminants that can cause new burnouts, you can do the job right the first time . . . eliminate costly, time-consuming call-backs.

Mounted on wheels, this handy assistant is the latest Du Pont effort to make your servicing job easier and more effective. And when it's time to recharge the system, you'll find Du Pont's improved lightweight "Zephyr" cylinder makes the job easier.

Take a "Zephyr" on your next burnout . . . or any other job. You can't go wrong.

Leading air conditioning and refrigeration wholesalers who sell "Freon" refrigerants can probably rent you one of the new Du Pont units now. But if you'd like to build your own, write to: Du Pont Co., N-2420AA, "Freon" Products Division, Wilmington 98, Delaware. Ask for Bulletin FD-1.

FREON® premium quality REFRIGERANTS

DU PONT

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

*FREON and F- followed by numerals are Du Pont's registered trademarks for its fluorocarbon refrigerants.

A MASTERPIECE FROM ANY VIEWPOINT. What distinguishes the "best" from the rest? In the case of Bendix-Westinghouse compressors and condensing units, it's higher standards in design, engineering, production, and quality control. Our goal is always this: to provide products that are "masterpieces" of dependability, efficiency, and economy. Turn the page for information on a super-capacity 115-volt compressor.

Bendix-Westinghouse **MOTOR COMPRESSORS**

11,000 BTU CAPACITY

WITH THIS 12-AMP., 115-VOLT BENDIX-WESTINGHOUSE COMPRESSOR

No need for your window air conditioner customers to spend extra money wiring up for a 230-volt circuit when your units are equipped with this efficient Bendix-Westinghouse compressor. For it delivers a full 11,000 BTU capacity *on a 115-volt circuit.*

Another big advantage of this 1-h.p., 2-pole model is that it requires no mounting straps or other external gadgetry. Since its springs are internally mounted, it can be bolted down in your unit permanently—and easily.

There are many other *extra values* for you and your customers with this compressor. For example, it saves shipping costs because its modern, compact design reduces weight. And servicing is easier because the compressor's tubing connections and terminal box are on top. Ask about model YCH232VA-1.

For the quiet, efficient operation so critical in window air conditioners, rely on Bendix-Westinghouse compressors. There's a model to fit every need. Write or call.

Bendix-Westinghouse

EVANSVILLE, INDIANA

A Division of Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio

Export Sales: Bendix International, 205 E. 42nd St., New York 17, N. Y.; Peter A. Karl, Inc., Union Station Bldg., Utica 2, N. Y.; Sabal-Kielmann, Inc., 15 William St., New York 5, N. Y.

July Climatological Evaluation Chart Gives '59 and '60 Ratings for 31 Cities

NEW YORK CITY—The third of four charts comprising a "climatological evaluation of air conditioning weather" for the key months of last year shows the air conditioning "sales climate" for 31 cities in July compared to "normal" and to the same month of 1959.

The evaluation was made by Weather Trends, Inc., a private weather forecasting and weather-recording organization.

Although the findings are presented in simple, summary form, a considerable amount of data was reviewed and analyzed, including:

(1) Average monthly and average maximum temperature; (2) number of days of 90°, or over, compared to normal and last year; (3) duration and extent of hot spells, if any; (4) other elements, such as number of wet days, humidity readings, percentage of normal sunshine, etc., to see if there were unusual departures.

Weather Trends placed ratings of 5 ("superior"), 4 ("favorable"), 3 ("normal"), 2 "unfavorable"), or 1 ("poor"), on the air conditioning "sales climate" for the 31 cities covered. In addition, a finer breakdown of the so-called "normal" category was made, using 3, 3—, and 3+.

Also, the air conditioning weather for each of the 31 cities during the period covered was rated as "much better," "slightly better," "better," "similar," "worse," "slightly worse," or "much worse" than in the corresponding month of 1959.

For last July, four cities got a "superior" rating and five a "favorable" rating. Seven were rated "normal," 10 "unfavorable," and five "poor."

Compared to 1959, nine of the cities were rated as much better, better, or slightly better; seven as similar; eight as worse; and seven as slightly worse. None got a rating of much worse.

Climatological Evaluation

Legend for 1960: 5—superior; 4—favorable; 3—normal; 2—unfavorable; 1—poor.

Legend — Comparison 1959: MB—much better; B—better; SB—slightly better; S—similar; MW—much worse; W—worse; SW—slightly worse.

Key City	JULY, 1960 Compared to: Normal	1959
Atlanta	4	MB
Baltimore	2	W
Birmingham	5	SB
Boston	3	SW
Buffalo	3	SW
Chicago	3—	S
Cincinnati	2	W
Cleveland	1	W
Dallas	3—	S
Denver	3	SB
Des Moines	3—	SB
Detroit	2	SW
Houston	4	B
Indianapolis	1	W
Kansas City	1	S
Los Angeles	5	S
Memphis	4	MB
Miami	5	MB
Minneapolis	3—	W
New Orleans	5	MB
New York City	2	W
Oklahoma City	2	SB
Omaha	2	S
Philadelphia	1	W
Phoenix	4	S
Pittsburgh	2	SW
Portland, Ore.	4	S
Raleigh	2	SW
Richmond	2	SW
St. Louis	1	SW
Washington, D. C.	2	W

Prepared by: Weather Trends, Inc., 550 Fifth Ave., New York City 36.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

To Serve San Fernando Valley

Air Cold Sales Opens Branch Wholesale Parts, Supplies Outlet In North Hollywood

LOS ANGELES — A new branch wholesale air conditioning and refrigeration parts and supplies outlet in the San Fernando valley area has been opened by Air Cold Sales, Inc., at 5008 Vineland Ave. in North Hollywood.

President Ernest Younis served the shish kabob he personally prepared at an open house to mark the opening of Air Cold's third wholesale store in the metropolitan area.

A new radio telephone intercommunication store-to-store system includes the new store, and reaches Air Cold's mobile equipment including cars of six salesmen and four trucks.

Bendix-Westinghouse, Detroit Controls, and the Remco drier line are exclusive with Air Cold in Los Angeles County.

At North Hollywood, James W. Frantz is manager, and Clifton Seltenright from the La Brea store is assistant manager.

PENN
Series 219 without external range adjustment
Series 219 space thermostat with range adjustment knob and integral air bulb
Series 219 with external range adjustment
LOOK WHAT'S NEW IN REFRIGERATION TEMPERATURE CONTROLS
Series 239 has both external range and differential adjustment.

Now! Compact size, highly accurate repeat performance, plus other new sales features!

Here's a new line of small, compact, Penn refrigeration temperature controls which has a *wider range* of applications with *fewer models.* The Series 219 has a fixed differential while the Series 239 differential is adjustable. Rated at 16 Amps., these models feature extremely close differential, precision "repeat" accuracy, and are not affected by barometric pressure or cross ambient temperature problems. Extra features include built-in conduit fitting on Series 219, visible linear scale and small bulb size. Closed-tank fittings and bulb wells as well as built-in compensation for ambient temperature are also available. Learn more about these controls . . . write for Bulletin 3270.

PENN CONTROLS, INC. Goshen, Indiana

EXPORT DIVISION: 27 E. 38th ST., NEW YORK, N.Y.

AUTOMATIC CONTROLS FOR HEATING, REFRIGERATION, AIR CONDITIONING, APPLIANCES, PUMPS, AIR COMPRESSORS, ENGINES

'Single Market' Concept

Trend Toward Economic Unity In Europe Emphasized by Kelvinator Int'l V. P.

DETROIT — American manufacturers with overseas plants serving the Common Market and other European countries should gradually adopt a "single market" concept toward the countries of Europe and England instead of viewing each country as a separate market.

This view was expressed by G. T. Etheridge, vice president of Kelvinator International Corp., world-wide appliance subsidiary of American Motors Corp., as his company began laying the groundwork for a "single market" approach through its foreign licensee manufacturing program.

"The single market concept represents the greatest opportunity for U. S. manufacturers in Europe and England because it fully recognizes many significant transitions in tariff structure, economic growth, and mutuality of interests among European countries," Etheridge said.

"These countries are reaching the point where they should no more be considered distinctly different and separate markets than the United States should be viewed as 50 markets, just because there are 50 states.

"While there are regional variations in tastes throughout the U. S., it is viewed as a single, national market, and this should be the basic approach to the European market. European unity, at least economically, is much more certain of attainment today than ever before," he said.

In line with this thinking, Kelvinator International has taken several steps in recent months to orient its own licensee manufacturing program and distribution organization towards more effective marketing in Europe.

Last December, Kelvinator International made a substantial investment in a new Italian company, Kelvinator Italiana, to provide a strong capital structure for meeting the demands of the growing Italian market. The previous manufacturing company had been entirely Italian owned.

A new French company, Societe Markt-Kelvinator, is being formed in partnership with the owners of the present licensee, Markt & Co. Kelvinator International is making a significant investment to add new strength to this operation.

In both of these instances, as well as with other foreign companies where Kelvinator International has recently made investments, majority ownership and local management remain in the hands of the nationals of the countries where the companies are located.

By providing an effective working partnership in licensee programs, the rewards and responsibilities of Kelvinator foreign manufacturing operations are shared by all investors, Etheridge said.

A recent Paris meeting, attended by top officials from Kelvinator manufacturing operations in Norway, Italy, France, Spain, Greece, and England studied inter-licensee cooperation and manufacturing integration to build greater strength and acceptance for Kelvinator appliances in the European marketplace.

The meeting produced the broad guidelines for sharing of marketing knowledge and consolidation of advertising and promotional efforts, including preparation and production of sales materials, it was stated.

A course was outlined for gradual standardization of basic products and components while maintaining sufficient flexibility to provide the special features demanded in various sections of the European market.

"Presently, the European market is divided into the Common Market, or Inner Six; the European Free Trade Association, or Outer Seven; and a half dozen non-associated countries," Etheridge pointed out.

"The continuous progress made by the Common Market, far ahead of its projected schedule, plus indications of its expansion, and strengthening of the EFTA, are all significant factors in the evolution of a single European market.

"There are approximately 260 million people in the Common Market and EFTA, plus millions more in other countries, some of which are taking initial steps to join these organizations. The growth prospects are tremendous as rapid strides are made in the improvement of their standards of living, which means adoption of electric refrigeration for food preservation and the better health that results.

"We are confident that Kelvinator International will gain highly favorable advantages in the European market as well as in other markets, through a program in which each licensee will produce the products and models that it is best able to manufacture and sell as measured against Kelvinator International's standards of quality, manufacturing efficiency and economy, and the competitive demands of the market."

Warren Elects Rebel Export Vice President

ATLANTA — The board of directors of The Warren Co., Inc., at its semiannual meeting, elected Albert Rebel, export manager for the company since 1951, as vice president in charge of export sales.

Albert Rebel

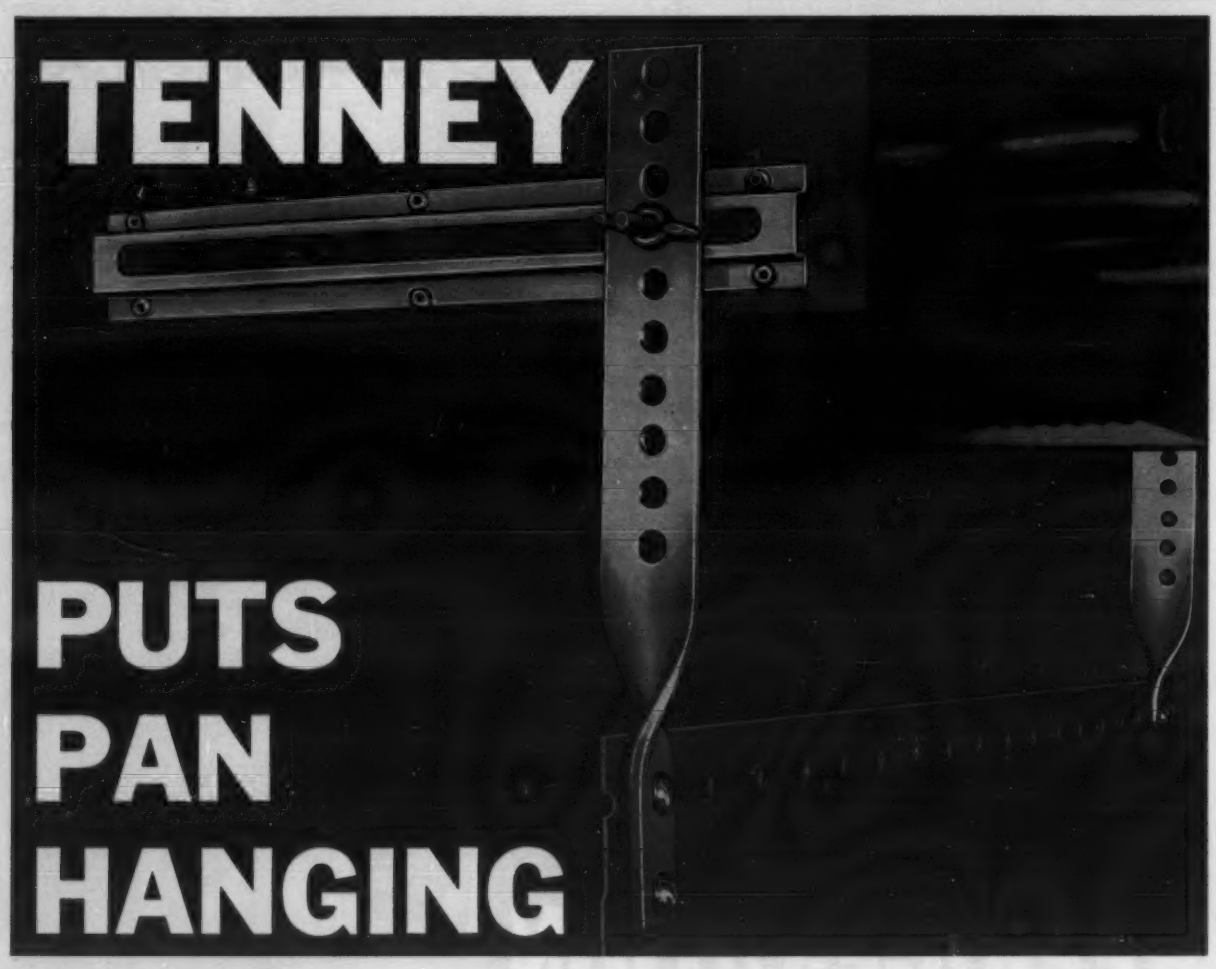
Rebel recently returned from a six-week trip through Europe during which he attended the International Supermarket Congress in Utrecht, Holland.

Ridge Tool Int'l Appoints Ifould

ELYRIA, Ohio — Ron Ifould has been appointed sales representative for Western Europe by The Ridge Tool International Co., Inc., it was announced by William L. Parcell, president.

Ifould, who lives in Paris, formerly worked with Wallaceburg Brass, Ltd., in Wallaceburg, Ont., Can.

Earlier this year, Ridge Tool announced the appointment of Medardo M. Martinez as representative for Latin America.



on the RIGHT TRACK!

Trust Tenney's forward-thinking engineers to dream up this time-saving idea for coil and pan installation: a built-in track running horizontally along the side of the coil **plus** perforated, vertical hangers attached to the pan. Thus, you can quickly adjust the distance **between** pan and coil, as well as the pan's position from **left to right** — and lock the installation into place with the turn of a thumb screw!

Tenney coils also provide for end mounted thermostatic expansion valve and a facetized aluminum fin for increased surface, stronger fins and better heat transfer.

Pans may be arranged either right hand, left hand or paired, right in the field. All are made of plastic coated aluminum that is virtually indestructible and easy to clean.

For complete details on all Tenney pans, coils and combinations, write today!

Refrigeration, Heating & Air Conditioning Products Division

Tenney ENGINEERING, INC.

1090 SPRINGFIELD ROAD • UNION, NEW JERSEY

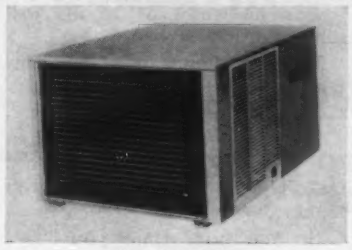
Gaffers & Sattler Adds Heat Pump, 2-3 Hp. Air-Cooled Condensing Unit

LOS ANGELES — Two new pieces of air conditioning equipment—a heat pump and a remote air-cooled fan-type condensing unit—have been added to the Gaffers & Sattler line.

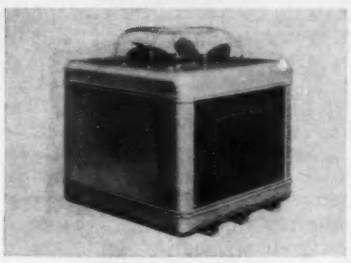
The self-contained air-cooled heat pump model 3THP-1 is a compact, low cost central heating and cooling unit in one package, the company said. Available in a 3-ton model, it can be mounted in the attic, crawl-space, basement, or on the roof. It can be installed all inside, half inside, or all outside.

"No 'dog-house' protection is necessary for a roof installation, as the unit has been approved for full outside installation," it was stated.

"The heat pump comes equipped with a 6 kw strip heater, which is automatically energized whenever unit enters defrost cycle; Tecumseh heavy-duty compressor which will operate at 130°F ambient temperature; propeller-type condenser fan; double drain pan; hermetically sealed system; and refrigerant circuit protection."



3-Ton Heat Pump.



Fan-Type Condensing Unit.

The fan-type condensing unit is designed for use with Gaffers & Sattler evaporators in air conditioning installations using upflow, downflow, or horizontal flow furnaces. These remote air-cooled air conditioning systems are recommended for new or add-on commercial or residential installations.

Condensing units may be located outside the building, or on a roof.

"The entire system is factory cleaned, dehydrated, and precharged with Refrigerant-22," it was pointed out. "This, combined with the 'Ezy-Connect' breakaway valves used to connect the system in the field, allows quick, economical installation."

These remote condensing units (models 2TCL and 3TCL) are available in 3 and 3-hp models.

400-Home Project In N. Y. Offers Fedders FlexHermetics

COMMACK, L. I., N. Y.—Fedders Corp. reported that a pioneer in the use of its new "FlexHermetic" system on Long Island is the Rosano Bros. Valmont Homes development here.

The 400-odd Valmont homes, priced from $16,490, will be offered completely equipped with Fedders central air conditioning and heating.

A press party celebrating the opening of Valmont Homes was held recently at the homesite. A buffet luncheon followed an inspection tour of the model homes. Salvatore Giordano, Fedders president, was the main speaker at the luncheon.

Giordano said that a recent magazine survey revealed that air conditioning is the number one feature that buyers want in their new homes.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Tech Students Build Home, Use Gas Air Conditioning

LOS ANGELES—A completely new home, designed and constructed by students attending the Los Angeles Trade Technical college, was recently opened to the public.

The model home, called "the sixty wonder," is a cooperative product of over 400 students representing various building trade classes.

Including many modern concepts in home designing, the five-room, two-bath home places a special accent on year-round indoor comfort featuring an all-gas heating and air conditioning system manufactured by The Payne Co., the firm reported, adding:

"The Sixty Wonder is a 'balanced-power' home which stresses the importance of matching the fuel for the best end results. The home is cooled with a 3-ton Payne 'Miracool' all-gas chiller unit which is located outdoors and an Upflow Payne forced air furnace which supplies the heating.

DISCUSSING Payne gas air conditioning and heating system put in students' model home on campus of Los Angeles Trade Technical college are (l. to r.) Orrin Burwell of Payne Co.; Dr. Dwight Adams, college faculty member; and George Warren and Kenneth Hill of Payne.

Representing Payne at the opening-day ceremonies at the model home site were Kenneth Hill, building industries consultant, and Orrin Burwell and George Warren of the Engineering Dept.

The group met with Dr. Dwight Adams of the Trade Technical college at the official luncheon to discuss the current heating and air conditioning installation.

Beat a path to Davison

for better moisture trapping

For years, refrigeration and dehydration experts have put their faith in Davison PA-400. No higher capacity desiccant has ever been needed. NOW ... if your specialized requirements for ultimate moisture removal—maximum drying at extremely low concentrations of moisture—call for a desiccant with even more unique capabilities, Davison suggests the newest companion to PA-400 ... DAVISON MICROTRAPS.

DAVISON MICROTRAPS are now available in quantities to meet your production requirements. For more complete information about this modern chemical moisture-remover, write or phone us today.

GRACE

DAVISON CHEMICAL

Industrial Chemicals Dept. 2606

Baltimore 3, Maryland

Inside Dope

By GEORGE F. TAUBENECK

(Continued from Page 1)

frog or spider in Newfoundland —better get your umbrella ready!

Other folk beliefs still current:

The cry of the curlew wading bird predicts rain in Ireland; in Nova Scotia, loons and quails are said to "call for rain"; and weather watchers anyhere in Asia expect a downpour if crows, wild geese, swallows, or bugs are flying low.

Almanacs in western Europe during the 17th century were rhyming their predictions. That practice persists today.

Recent issue of the *Old Farmer's Almanac* presents this running description for the month of December:

"Gone are the leaves, all except Eve's . . . Not a wild, calm and mild . . . Hit the sack, winter is back . . . Rain or snow, who's to know? . . . Christmas green, so it seems . . . Fine and cold, our story is told."

Down to Earth

A U. S. governmental weather service was established in 1870, and became part of the U. S. Weather Bureau in 1891.

Today our Weather Bureau has 247 airport stations and 46 offices in major U. S. cities, as well as 650 sub-stations which perform special duties such as measuring the depth of snows and rivers.

In New York City the Weather Bureau's findings are broadcast in a highly colorful fashion.

A 150-foot tower flashes brilliant colors by night to inform weather watchers whether (tomorrow) they should wear raincoats, snowshoes, or Bermuda shorts.

This tower is illuminated with green light when the weather is expected to be fair; flashing orange indicates "rain"; and intermittent white emanations warn: "snow."

The U. S. Army has developed a three-pound "weather station" which is sent aloft, and then returns radio signals that are decoded instantly by an electronic computer.

This system spots high-altitude indications of oncoming storms, hurricanes, tornadoes, and other bad weather urgencies with remarkable speed and accuracy.

Trust Your Corns

Whatever meteorological wonders science may produce, Joe the Amateur Weather Prophet will go right on heeding the behavior of his corns and judging weather by his moods and sensations.

And he won't be wholly unscientific.

When a "low" or storm center is approaching, the surrounding pressures are falling.

Joe's body tissues will warn him by taking up additional water (from inside his intestinal tract).

So the next time you "feel like rain," don't discount your talents as a weather prophet.

You're your own best built-in weather barometer!

How To Be an Expert

Next time you see all those little H's and L's arrowing across the weather map on your television screen, try this one on your spouse:

"The turbulence produced by the occlusion of the high and low fronts probably will result in precipitation."

Translation: we think it will rain.

Generally, the highs originate in the north and move southeastward — carrying cool, dry air.

Lows shape up in southern regions and move to the northeast—bringing warm, humid air. The highs usually produce good weather, the lows, bad.

Troubles begin when they bump into each other. The cool air, being heavier, pushes the warm air up and back.

This causes warm air to dissipate, and lose its capacity to contain moisture.

The result is rain.

Back to the Ol' Launching Pad

Those H's and L's on your weather map represent the hourly tracking of some 400 U. S. Weather stations.

Any viewer should be able to learn from them what kind of weather is going where, and when.

Even without a map, it's often possible to predict with reasonably accuracy what's heading your way. The formula:

Stand with your back to the wind, then make a half turn (45 degrees) to the right. Normally a high will occur somewhere on your right and a low somewhere on your left.

If either one is to the west, it probably will pass over you, bringing a change in weather.

If not—if they are to your north and south—you'll either have to wait until the wind changes, or forget the whole thing and go back to the H's and L's on your TV map.

Incidentally, the back-to-the-wind method won't work reliably in city areas where large buildings interrupt the direction of the wind, or near an ocean where sea breezes are predominant.

Stories of the Week

In Alaska a Texan was boasting (what else?) to a Ketchican rancher.

"Why, it takes me three days to drive my car around my ranch," Tex averred.

"Uh huh," sympathized the Alaskan, "I used to have an auto like that."

Texas oilionaire gave his small son a chemistry outfit.

Du Pont, of course.

Political Stories

Somebody described conservative Senator Barry Goldwater of Arizona as:

"Speaking from a heart covered by a $30 shirt."

After Nixon visited Rockefeller on the eve of the 1960 Republican convention, the arch-conservative *Chicago Tribune* bannered:

GRANT SURRENDERS TO LEE.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

ELECTRONIC
WATER CONDITIONER

Means fewer water system breakdowns, less actual service time... more satisfied customers... profits!

Suggest *AQUATROL for your next water tower installation... and look forward to months of maintenance-free, service-free operation. AQUATROL... by combining proven medical theory with space-age technology... does away with organic slime and algae in the system without chemicals! Greatly reduces down time..."bleed-off" by 50%, and eliminates:

1 Clogging of screens!
2 Corrosion-causing bacterial slime!
3 Algae growth throughout system!
4 Fungus deterioration of tower wood!
5 Chemical damage to unit!

AQUATROL can pay big dividends in time and dollars! Sell AQUATROL with your next water tower installation!

*A trademark of AQUATRONIC Industries Inc., Los Angeles, California PATS. PEND.

Another exciting product from Aquatronic Industries Inc.... where the future is now... electronically!

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VIRGINIA Chemicals®

REFRIGERATION BULLETIN

"Helpful facts for the serviceman"

ANSWERS TO FIELD CHARGING PROBLEMS

CAN-O-GAS®—INDUSTRY'S WIDEST CHOICE OF REFRIGERANTS AND CHARGE SIZES

Can-O-Gas provides a reliable and convenient method for adding regular or critical charges of refrigerants in the field. No heavy cylinders or metering devices to lug along, no deposits on cylinders. Can-O-Gas comes in small, compact cans you can use and discard.

The Can-O-Gas method introduces a wide choice of refrigerants in preweighed charges of a few ounces to several pounds.

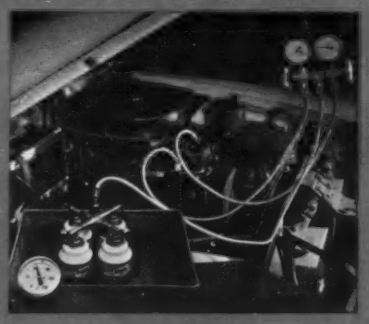
SPECIFIC ADVANTAGES OF CAN-O-GAS

- Charging or recharging can be done accurately away from the shop
- Contamination by moisture and noncondensable gases is avoided
- Vapor pressures for gas phase charging can be easily maintained by warm water immersion
- Simultaneous opening and dispensing of 2, 3 and 4 cans of refrigerant provides preweighed charges of 30, 45, 60 oz. or combinations thereof

CALIBRATING DEVICES ELIMINATED

The Can-O-Gas handy field-charging method makes possible addition of preweighed regular charges or of fractional charges without need for scales or other devices. With the use of Multi-Openers, it is possible to deliver charges from 15 to 60 oz. in increments of ½ oz.—with an accuracy of ±4 grams.

PRINCIPAL USES OF CAN-O-GAS



Can-O-Gas has been widely accepted by service and maintenance men for in-the-field charging of water and beverage coolers, freezer cabinets, and auto air-conditioning systems. They can rely on Can-O-Gas for maximum controlled purity and for greatest accuracy without cumbersome containers and measuring devices. There is no easier way to add critical charges of refrigerants in the field in either the gas or liquid phase.

MULTI-OPENER

Dispenses contents of a single can or up to four cans one by one or simultaneously for fractional charging.

SINGLE CAN VALVE OPENER

For any size Can-O-Gas, clip-top or screw-top. Opens 15 or 16-oz. cans. Special nylon seat assures positive shutoffs.

HOW SUPPLIED

Freon-12* is supplied in 15-oz. cans and a wide variety of preweighed charges. Freon-114* and sulfur dioxide are supplied in 1-lb. cans; Freon-22* in the new 1-lb. and 2-lb. aluminum disposable cans; and methyl chloride in 2-lb. steel cylinders. All Can-O-Gas products are available in screw-top or clip-top closures.

"Virginia" is the only national sales agent and authorized repacker for Du Pont's Freon* refrigerants. They are supplied in all popular sizes.

**Du Pont registered trademark*

See back page for full line of refrigeration products ▶

FOR TROUBLE-FREE MAINTENANCE USE "VIRGINIA" REFRIGERATION PRODUCTS

"Virginia" Scale & Corrosion Inhibitor

Reduces scale buildup sharply, keeping scale-forming solids in suspension or solution. Less scale, less labor, lower maintenance costs.

"Virginia" Liquid Scale Remover

Ideal for heavy scale. Dissolves 3 lb. of scale per gal. Works fast. Inhibited to prevent metal damage. (Anti-foam agent and test papers included with every container.) Light shatterproof throwaway container for easy handling and easy pouring.

"Virginia" Solid Scale Remover

Highly inhibited—safe for use on galvanized, dipped zinc and aluminum water-cooled equipment. Destroys algal growth. Contains 96% sulfamic acid.

"Virginia" Algae-Cides

Adaptable to the special use requirements in (1) towers, (2) evaps, (3) air washers, and (4) ice machines and drip pans. A new No. 4 high-potency formula kills the tough resistant types of algae.

Du Pont FREON® Refrigerants

Nonflammable, nontoxic, stable, odorless

Best known for premium quality. Most widely used refrigerants in the industry. "Virginia" is the only national sales agent for Du Pont "Freon". F-11,* F-12,* F-13,* F-22,* F-113* and F-114* are available in cylinders of all popular sizes.

**Du Pont registered trade mark*

"Virginia" Ice Machine Cleaner

Eliminates slow freezing, bad taste and odor. Will not injure enamel or polished metal surfaces. Highly effective on automatic cube or flake ice machines.

Presstite Insulation

Tape—ideal for stopping pipe drip. Adheres to any dry surface. *Permagum slugs*—seals seams, copper tube, BX and conduit entries against moisture. *Cords*—nonstaining, odorless, shaped for use on display cases, freezers, room coolers, etc.

VascoCel Insulation

Preformed of soft, durable, clean, odorless Neoprene. Cuts time and labor costs sharply. Closed-cell structure makes condensation impossible. Ozone, oil, acid, and fungus resistant. Application temperature range 0-220°F. Available in ⅜", ½" and ¾" wall thickness.

"Virginia" Degreasing Solvent

No. 10 has low toxicity, is noncorrosive and fast drying. High flashpoint of 154-160°F reduces fire hazard; dielectric strength 20,000 volts.

Ask about "Virginia" "Freon 11" Cleaning Solvent for motor burnouts.

"Suniso" Refrigeration Oils

G Oils are improved for greater stability and lower waxing point. Available in 3G-150 SSU, 4G-300 SSU, and 5G-500 SSU. Dual Inhibited oils have same low wax point, resist breakdown and copper-plating even more effectively.

Can-O-Gas® Packaged Refrigerants

Throwaway cans—full line in screw-top or clip-top cans. Wide variety of preweighed charges, accurate to ±4 grams. Selection of Freon* gases, sulfur dioxide, and methyl chloride.

Carried by wholesalers everywhere. Order from one nearest you or contact Refrigeration Division, VIRGINIA SMELTING COMPANY, West Norfolk, Va.

Available in Canada and many other countries

"Virginia" is the only national sales agent and authorized repacker for Du Pont's "Freon" Refrigerants.

D77 Form 523

Printed in U.S.A.

BHC Cites Jobs Saved for Hydronics By C&I Program

Circulates 20,000 Pieces Of Literature In Year

NEW YORK CITY—Continuing output of hydronic publicity, technical data, and market research information by the Commercial & Industrial Div. of National BHC coupled with strong C&I promotion efforts being made by most local BHC councils and others is having good effect in meeting the threat to hydronic heating from competitive types in the commercial and industrial field, according to Henry M. Gibb, national BHC vice president.

The C&I program was established by BHC one year ago with the backing of MCAA, UA, NAPC, the Joint Industry Promotion Committee, and manufacturer members of the national BHC.

Since then, Gibb noted, "more than 20,000 copies of technical articles and factual data showing the benefits of hydronic heating for schools and other buildings have been distributed to contractors, wholesalers, and others in the industry to use in selling architects, engineers, and school boards."

It was learned that at least one large apartment building, one office building and five schools have been "saved" for hydronics through the application of this material at the local level, said Gibbs, who is also manager, Pacific Steel Boiler Div. of Crane Co., and chairman of BHC's C&I Div.

As a major part of the overall effort being made to head off threats to the C&I hydronic market, Gibb emphasized the role of several outstanding local councils.

He cited the Puget Sound BHC for its regular program of covering every school board meeting in the area, of contacting school officials and architects with BHC materials."

Also cited was the Hydronic Heating & Cooling Council of Detroit which has already spearheaded personal contact, speeches and mailings to architects, and scheduled an industry dinner for school board officials.

Other specially-noted local council activity was the formation of a joint BHC-MCA program in Philadelphia for C&I promotion, and similar action in Baltimore, Cleveland, Minnesota, and New York councils. Chicago and Milwaukee councils held a joint meeting recently to complete their C&I plans.

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ENGINEER,
FOR SERVICE ENGINEERS

SEE YOUR WHOLESALER

J & G ENTERPRISES INC.
P. O. BOX 3262
OKLA. CITY, OKLA.

Plant Vacation Schedule

Shutdowns Starting July 24 or Earlier

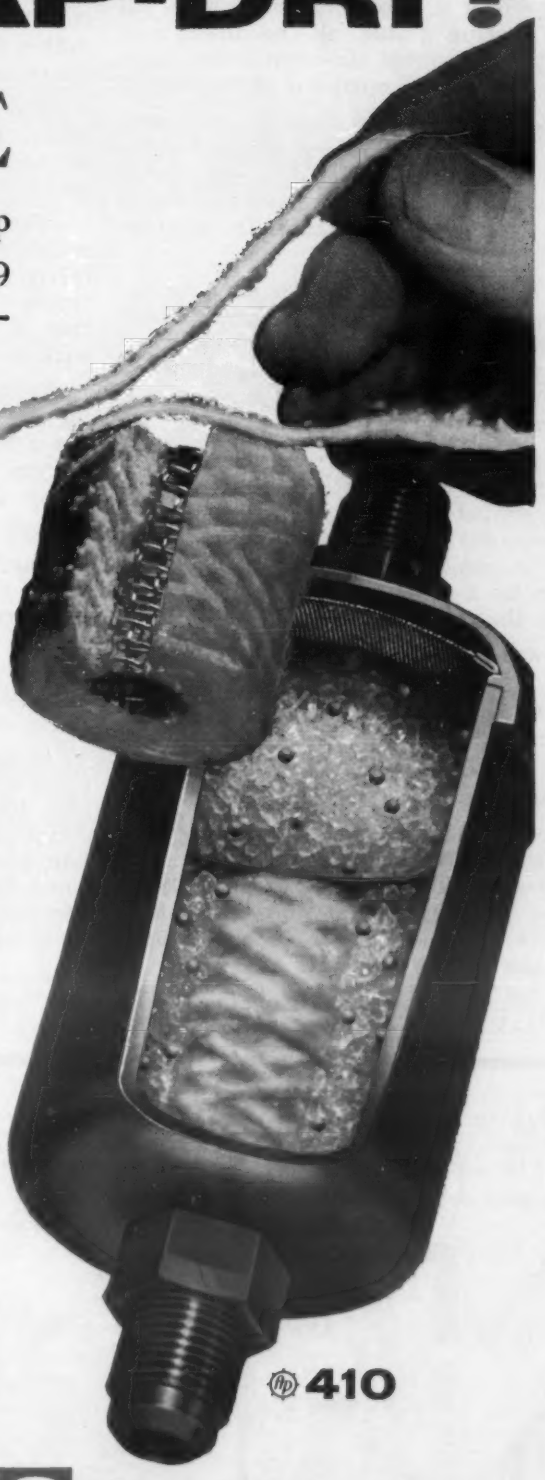
Company	Shutdown Period Plant	Office	Shipments From Plant
C. V. Hill & Co., Inc., Trenton, N. J.	6/30-7/9	6/30-7/9	Emergency
Waterman-Waterbury Co., Minneapolis.	7/3 -7/16	7/3 -7/16	Limited Truck Load Orders
Handy & Harmon Mt. Vernon, N. Y.	6/23-7/10		Emergency
Bridgeport, Conn.	7/15-7/30		Emergency
Rome-Turney Radiator Co., Rome, N. Y.	7/21-8/6	Open	None
Paxton-Mitchell Co., Omaha.	7/22-8/6	Open	Emergency
S. & R Soda Fountain Mfg. Co., Inc., New York City.	7/22-8/6	7/22-8/6	None
Texas Instruments, Inc., Metals & Controls Div., Versailles, Ky.	7/22-8/6	Open	Emergency
Dole Refrigerating Co., Chicago.	7/23-8/6	7/23-8/6	Emergency
Resistoflex Corp., Roseland, N. J.	7/23-8/6	7/23-8/6	None
Revco, Inc., Deerfield, Mich.	7/23-8/6	Open	Emergency
Scotsman, Queen Products, Div., King-Seeley Corp., Albert Lea, Minn.	7/23-8/6	Open	None
Connor Engineering Corp., Danbury, Conn.	7/24-7/30		None
DeBothezat Fans Div., American Machine & Metals, Inc., E. Moline, Ill.	7/24-8/4	7/24-8/4	Emergency
Fogel Refrigerator Co., Philadelphia.	7/24-8/6	Open	Stock Only
Jordon Commercial Refrigerator Co., Philadelphia	7/24-8/6		Regular
Lau Blower Co., Dayton, Ohio.	7/24-8/6	Open	Stock Only
Lilie-Hoffmann Cooling Towers, Inc., Plainview, Texas.	7/24-7/30		None
Melchior, Armstrong, Dessau, Inc., Ridgefield, N. J.	7/24-8/4	Open	Regular
Modern Machine Works, Inc., Cudahy, Wis.	7/24-8/6	Open	None

To the list of PLANTS STAYING OPEN, appearing in preceding issues of the NEWS, add **Imperial-Eastman Corp.**, Chicago, and **Lilie-Hoffmann Cooling Towers, Inc.**, St. Louis.

WHY TRAP-DRI®?

BECAUSE

costly Egyptian cotton plus deep filtration tunnels give 5 to 9 times* the filtering area of conventional filters



*For particles down to 5 microns in size.

The diamond pattern on the filter element is no mere decoration. It's a pattern behind which you'll find a honeycomb of diamond-shaped tunnels for full-depth filtration. This filter design can only be achieved through use of expensive, long-fibre Egyptian cotton. Just one of the investments we make to give you refrigeration's finest drier-filter-strainer . . . perfect protection against corrosive acids, moisture, dirt.

Other TRAP-DRI features include *a balanced blend* of PA 400 silica gel and molecular sieve that completely adsorb acid and acid-forming moisture.

Write today for facts about TRAP-DRI and other products of the Heating and Air Conditioning Division, Controls Company of America . . . creators of new ideas for control of time, temperature, flow and motion.

Surface-type filter (left) — Dirt collects on outside only, gradually closing filter.

410 filter (right) — Dirt is collected in deep, large-capacity tunnels without clogging filter.

410

Creative controls for industry

CONTROLS COMPANY OF AMERICA

HEATING AND AIR CONDITIONING DIVISION

2460 N. 32nd Street, Milwaukee 10, Wisconsin • COOKSVILLE, Ontario • ZUG, Switzerland

Editorial

Pregnant Idea for Our Industry: An Air Conditioning Sales Academy

(Continued from page 1)

the great salesmen of all time) frequently has averred: "Salesmanship died during World War II, and nobody seems to be trying to revive it."

In the air conditioning business we do a first-class job of training our mechanics; but what about our salesmen? What are we doing for them professionally—to raise their sights and improve their techniques?

As Robert M. Price of the NEWS puts it:

"Those who market their products to consumers cry out in the night about the low calibre of salesmanship found at the dealer and distributor levels.

"In air conditioning sales, with particular reference to the residential and commercial end of it, the 'buck' stops here. All the engineering genius, all the direct mail pieces, haven't moved air conditioning sales close to the volume predicted and expected.

"What, exactly what, has the air conditioning industry done about training sales personnel at the dealer and distributor level? Individual companies have done much in this area. But how about an *industry* effort?"

Mr. Price's IDEA: organize an Air Conditioning Sales Academy, charged with training and graduating qualified salesmen who can *push* our industry's products at the rate they deserve (but haven't yet approached nor realized).

This Air Conditioning Academy could be established at a central location. Adequately staffed by experts on salesmanship —plus selected guest lecturers from our industry—it could present a curriculum decided on by a committee of manufacturers and distributors.

Salesman would pay tuition, supplemented by manufacturers and contractor subsidies, to cover the costs of such an Industry Academy.

Bob Price has something here. Something big, possibly.

There are plenty of executives in our industry who know practically all there is to know about selling. If their skills could be imparted to salesmen at the distributor, contractor, and dealer levels, our business might take off like a rocket.

For corroboration, let's quote Claude Kirk, national sales manager of central air conditioning for Fedders:

"'Please help us find salesmen!' is the plea we continually hear from distributors, dealers, and even in conference sessions with friendly competitors. In my opinion, this is the major problem facing our industry."

If we are to create mass desire for air conditioning, we must sell clean air, clean homes, peace of mind, comfort and relaxation, home operation savings, owner prestige, and enhanced real estate values.

This will require sales education of a professional nature.

An air conditioning salesman doesn't have to be an engineer. To be sure, he must understand the benefits of living in an air conditioned home, and be able to create a desire for these benefits in the minds of his prospects.

That takes personal SALESMANSHIP, which is an art in itself, and which needs to be taught by professionally proficient educators.

There are many fine technical schools which teach heating, air conditioning, and refrigeration fundamentals. Many manufacturers competently train men in the application of their equipment (usually combined with installation and service training).

Presently, however, no recognized "school" is in existence to tell a salesman the only precepts he really needs: how to sell the multiple *benefits* of air conditioned living, and which piece of his equipment is best suited for a particular job.

Surely our sales-hungry industry should deem it urgent to organize a nationally sponsored course which could train salesmen in the art of how to create desire for year-round air conditioning in the minds of purchasers of new homes, and among existing house owners.

Come to think about it, this could be a job for the Air-Conditioning & Refrigeration Institute. Managing Director George Jones, our industry's most vocal and articulate advocate of a revival of salesmanship, could head up a program of this nature admirably. Furthermore, George could be its most inspiring guest lecturer.

Subscriber reaction to this pregnant idea earnestly is solicited.

IN THE OFFICE ALL GRULLER EVER TALKS ABOUT IS GOING FISHING···
BOY! I CAN'T WAIT TO THROW THAT OL' LINE OUT THERE AGAIN···HEARD ABOUT A NEW SPOT WHERE THE FISH ARE SO HUNGRY THEY BITE THE BOTTOM OUT OF THE BOAT! GOT A NEW ROD···GOT A NEW REEL···
AND WHEN HE FINALLY DOES GET TO BAIT A HOOK ALL HE TALKS ABOUT IS BUSINESS···
I ASK YOU, IS THAT ANY WAY TO RUN A BUSINESS? ···SO I LOOKED HIM RIGHT IN THE EYE AN' I SAID···"YOU HANDLE YOUR DEPARTMENT AND I'LL HANDLE MINE!" I SAID···"GO AHEAD···GO TO BIGDOME!"
THANKS AND A HAT TIP to AL MORAGNE, 1418 SHELTON AVE., NASHVILLE, TENN.
5-20
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They'll Do It Every Time

by Jimmy Hatlo

MORE ON CHATTERING THERMOSTATS--

Minneapolis-Honeywell
Regulator Co.
Minneapolis, Minn.

Editor:

In your May 29 edition of the AIR CONDITIONING, HEATING & REFRIGERATION NEWS, you had on page 17 under Service and Supplies, a chattering thermostat comment from a starting relay manufacturer.

Frank, in reading the manufacturer's comment in regard to a chattering mercury switch thermostat, we feel your readers may obtain a mistaken impression of when your relay manufacturer recommended replacing the thermostat.

Holding a light bulb or any other slow heating source on a cooling thermostat will close the thermostat contacts and we agree that no large arc should be noticeable; however, it is normal for a thermostat to have an arc on the opening of the circuit on almost every cycle (depending on current flow at the time the thermostat opens).

We suggest the procedure for thermally operating a cooling thermostat as proposed in your May 29 article be followed; however, instead of looking for arcing we would recommend the serviceman listen to make sure the starting relay operates only once on each thermostat cycle.

We would also like to point out that chattering mercury switch thermostats are very unusual, whether it be ours or of competitive manufacture. Rather our experience has shown a manually adjusted thermostat can be made to chatter by rapidly raising and then lowering the thermostat setting, however thermal operation will result in correct operation.

We do not feel that the serviceman should examine the thermostat on the basis of arcing at its contacts to determine whether the thermostat is causing the problem to the relay.

J. M. EWART

THOUGHT WE WERE 'JUST ANOTHER TRADE PAPER' UNTIL HE SAW ONE ISSUE

Air Company Roof
Air Conditioners
4720 Bedford Ave.
Brooklyn 35, N. Y.

Editor:

Have been receiving your flyers on your NEWS but never paid any attention to them. Had the idea it was just another trade paper that we never get to read anyway.

We receive half a dozen publications that just pile up waiting for 5 minutes time that we just do not seem to get.

When we received your first issue we then realized that we were really missing something in our business.

Had you sent us a free copy years ago and if we had five minutes we would have subscribed years ago, just cannot see how anyone can be in our line without such a paper.

Enclosing check for $6.

ERWIN ROSENTHAL

LIKES 'BEST TYPE OF HEATING' STAND

Georgia Power Co.
Atlanta, Ga.

Editor:

I am a regular reader of AIR CONDITIONING, HEATING & REFRIGERATION NEWS and enjoy the many fine editorials and articles of value to me in the field of air conditioning and heating. Particularly, do I congratulate you on your editorial in the June 12 issue titled "The Best Type of Heating." This is indeed a splendid editorial position for your paper. I presume from this editorial that you will continue to give space to electric heating and air conditioning articles when they are new and pertinent.

HARRY T. YOPP,
Supervisor

AIR CONDITIONING HEATING & REFRIGERATION NEWS
F. M. COCKRELL, Founder

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Robert M. Price	A. Schildhammer	Rex Smith	AXminster 2-9501
Frank Taylor	Charles Pokorny	Dave Ryden	Justin Hannon

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Miami Air Conditioning Sales--

(Continued from Page 1)

there in 1960 seems to be, on the basis of some other reports, somewhat typical of that in other principal population centers in the south.

In general, the pattern seems to have been a turndown in sales and installations of large "built-up" central systems, a continuing good increase in residential installations with an ever-increasing higher percentage for heat pumps, and a realization of a need for the more intensive cultivation of the replacement market in the principal categories of the commercial market.

Big Hotel Building Came To Standstill

In the large "construction type" job, Miami suffered perhaps more than other areas, because last year the big resort hotel building on Miami Beach came to a virtual standstill. For years, skeptics had been saying that Miami Beach was being overbuilt and in 1960, the predictions seemed to have come true. No new "hotel of the year" was built, and even the motel boom slowed to a near halt.

One development that helped, in the past couple of years, to take up some of the slack in new construction, has been the addition to existing facilities, particularly some of the larger hotels, for the purpose of housing convention facilities. These are of a rather substantial nature; the addition to the Fontainbleau hotel, for example, is said to be capable of seating 6,000 persons.

Apartment Buildings Are Major New Activity

The major new construction activity in the Miami area has been in apartment buildings, many of them cooperatives. Some of the early apartment house jobs were air conditioned with central systems, and at least one was done with individual heat pumps of an unusual type, individual systems for each apartment with a water-to-water type system, featuring the application of a marine-type condenser using sea water, and a closed water circuit for the individual units.

Trend Toward Use of Through-the-Wall Units

However, many of the more recent co-op apartments are making use of through-the-wall room air conditioners of the heat pump type.

This apparent trend to the use of through-the-wall units in the more expensive type of cooperative apartment is deplored by some air conditioning contractors.

"Sure, we sell these units too, although we probably wouldn't make as much on the job as we would by installing a central system," commented one contractor. "But that's not so much the point as is the fact that in the larger type of individual apartments the through-the-wall unit may prove unsatisfactory to the owner and user, and give air conditioning a black eye generally.

"The wall units can't give the apartment tenant the kind of complete year-round air conditioning that give real satisfaction and make the user a booster for air conditioning," the contractor contends.

"But another factor may be even more important to the man to whom the air conditioning represents a part of the investment he has made in the apartment. It is well recognized that the through-the-wall units have a much shorter life than central systems—maybe not any more than a third as long—and if the apartment owner has to replace the unit much sooner than he expected, is he going to feel that the industry has cheated him?"

One reason for the "skimping" in apartment air conditioning systems in Miami, according to contractors, is the limit which FHA has imposed on the amount of money per room that can be loaned for apartment house construction. By the time the builder gets everything else he wants in an apartment, he hasn't enough left to do a decent air conditioning job. Again, the thought is that this is a short-sighted policy on the part of FHA, because it cuts the real value of the structure.

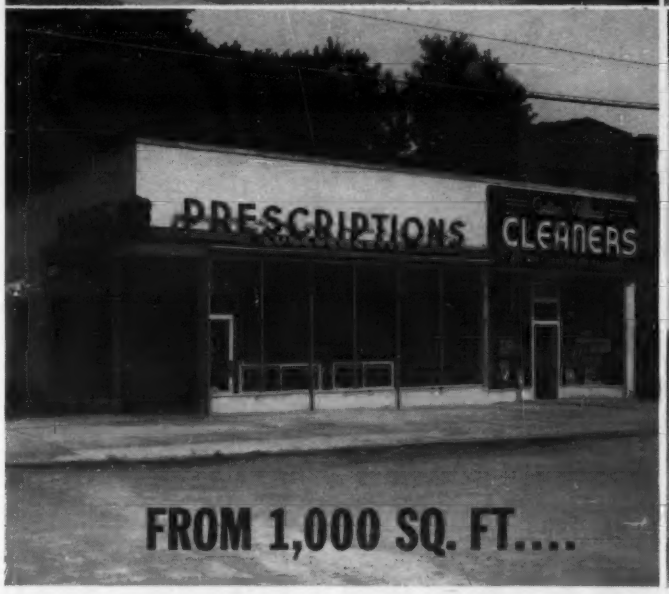
"I think there should be some kind of a concerted industry effort to convince the FHA to increase the amount per room it will guarantee on loans, where an apartment is to be air conditioned, or to set some sort of standards for air conditioning of apartments," declared one contractor.

The "conventional" market for commercial air conditioning did not come up to expectations in 1960, most of the Miami contractors agreed, and the business that was to be had was extremely competitive. One ray of hope was some indication that a replacement market is beginning to show up in the commercial field.

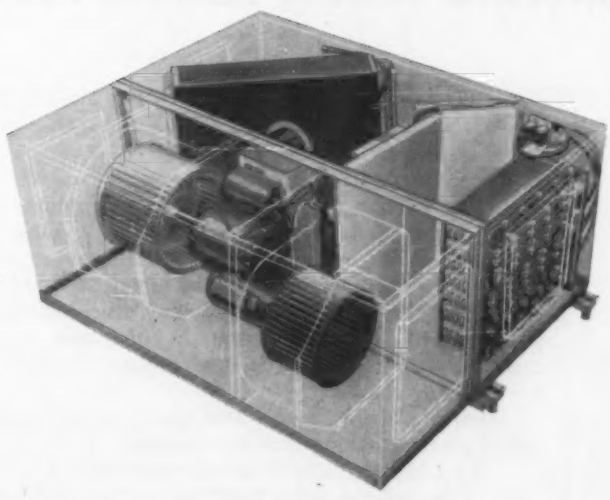
Moreover, Joe Singer and Bernie Row, who operate the Airko Co., have done some of this replacement business, and they report success with rehabilitating the used equipment taken in trade and selling it to certain customers who for various reasons would not figure in being in the market for new equipment.

"You must have a good shop and know your costs, but there can be a good profit in used

(Continued on next page)



JUST HOW VERSATILE IS THE FEDDERS Adaptomatic



No central air conditioner in history has been as widely or as successfully applied as Fedders 2-HP and 3-HP Adaptomatics. The unique split-chassis design of these all-in-one models facilitates installation in the closest quarters. And their exclusive Pressurized Condenser Air System permits this air-cooled package unit to install in any interior location.

As a heat pump, the Adaptomatic delivers year 'round comfort to average-income homes all over America at realistic operating costs. (Only $178 for a 7600 degree-day winter at a 1½ cent KW rate, according to one recent utility study of a properly designed installation.)

Adaptomatics provide summer air conditioning or air-conditioning-plus-heating in commercial structures of all types and all sizes, from a retail store... *to a 1,000,000 sq. ft. skyscraper!* (The 23-story Atlanta Merchandise Mart is an outstanding example of how the Adaptomatic is being used as a "building block" air conditioner in the largest buildings with astounding savings.)

Where does the Adaptomatic go from here? Can its versatility be stretched still further? Or do we make a new start?

Turn the page and see...

Miami Sales--

(Continued from preceding page)

equipment if you keep in good contact with the market," said Singer.

The "suburban type" shopping center has helped the overall market for air conditioning and refrigeration equipment somewhat. The broad run of air conditioning contractors has been generally pleased with the way in which the air conditioning installations have gone in the shopping center, for the following reason:

Apparently for the reason that some of the larger retail chain store organizations did not wish to become involved with a central or over-all type system that would provide air conditioning for the entire shopping center, the various stores each chose their own type system. Thus, instead of the job going to a single large mechanical contractor, there were several jobs split among several different contractors.

If the commercial market in Miami turned out to be something less than sensational in 1960, sales of central residential air conditioning systems showed the kind of improvement which proved heartening to many.

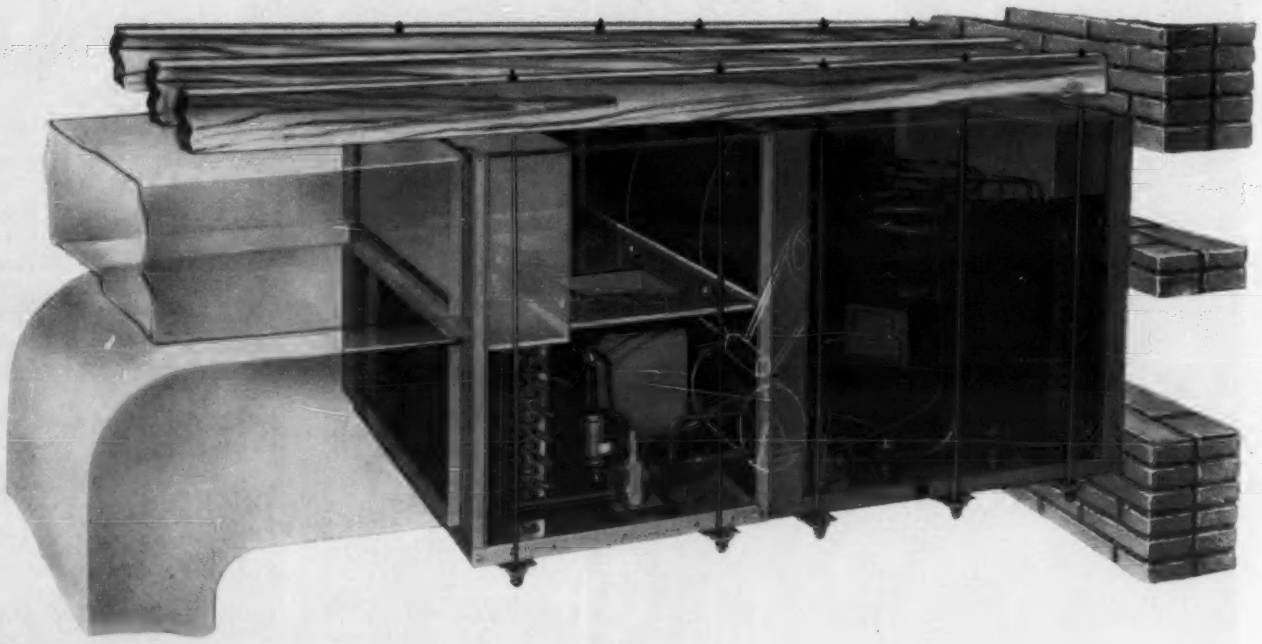
"I don't believe it will be too long before the local FHA will require that every new home carrying an FHA-insured mortgage over a certain minimum value be equipped with year-round air conditioning," was a viewpoint expressed by one dealer.

When he heard this comment, another dealer said:

"Hell, the builders themselves may bring this about before the FHA ever does anything like that. People are not going to buy homes without air conditioning which will take a big dip in value because of the lack of it as soon as the buyer moves in. That is forcing the builder's hand."

While the heat pump is beginning to predominate in the year-round residential systems, there is considerable variety in the approach to such installations. One of the more unusual approaches has been that designed by Robert S. Lafferty, Jr. of Hill York Corp. who has used a conventional summer central air conditioning system in combination with a hot water boiler which supplies hot water for household use and for heating. New compact boiler design and the slab and utility room type construction of Miami homes help to make this a desirable type system, Lafferty explains.

Since Miami is one of the few "semi-tropical" areas in the continental U.S., it has some application design and product problems peculiar to it. Ambients include high humidities around the clock much of the year, and this is taken into consideration in design. Hill York favors the twin-compressor type of system on residential systems,



NEW 5-HP FEDDERS Adaptomatic V "OPENS

ALL-IN-ONE AIR CONDITIONER CONVERTS FAST A REMOTE SYSTEM...WITH HALF THE

Here's a whole new repertoire of money-saving, time-saving stunts for air conditioning contractors... *by Fedders' new Adaptomatic V.*

Available both as a summer air conditioner and a year 'round heat pump, the 5-HP Adaptomatic retains the same basic design features that makes 2-HP and 3-HP models best-sellers: the same all-in-one efficiency... the same factory-charged and -tested reliability... the same ease of installation... the same low weight-to-BTU ratio... the same relative compactness.

Of course, this new Adaptomatic utilizes Fedders' Pressurized Condenser Air system. A belt-driven centrifugal blower push-pulls an adequate supply of condenser air through ducts to permit indoor installation.

Split-chassis design, too. Allows passage through narrow doors, hallways, hatches without using a demolition crew. But now the split-chassis idea pays even greater dividends: *The two-piece chassis of the 5-HP Adaptomatic V "opens up" into an indoor and outdoor section... becomes a real remote system!*

Dual service valves in each section allows you to cut liquid and suction lines and add inter-connecting tubing without losing the factory refrigerant charge. In most installations, the built-in accumulator and thermal expansion valve will compensate for the added tubing. In other installations, the service valves simplify any necessary hermetic processing or charge adjustment. In either case, you do a complete 5-HP remote installation in a fraction of the time it now takes you.

On top of this, add a new space-saving discharge-return plenum for free-blow installations.

Now, do you begin to see the possibilities?

1. In high-rise office buildings, sell an air-cooled installation by suspending Adaptomatic V from the ceiling and duct to individual exec ve orator section into the gen al installation. (That's right— *in*

2. In retail stores, sup-m ette buildings, use Adaptom c top-side ducts discharging t up an indoor duct system. Or h g the ceiling... using ducts th conventional remote syste

3. Residential jobs, o ou attics... or basements... or utd pitch is limited, install only e

4. Use any of these ta cooling, as well as for cool al

If you want to kno ac Adaptomatics are (and how ers mail the coupon.

to keep the humidity low at all times, and other contractors have a variety of solutions to this problem.

"Like any resort area, there are often large concentrations of people beyond the expected load. For example, for some of the large hotel suites where a 3-ton system would seem likely to provide excess capacity, it has been found necessary to install 8-ton systems. Reason for this is basic "V.I.P.'s" often occupy these suites, and may entertain 100 or more people in the relatively confined quarters and any inadequacy of the air conditioning system in these circumstances can quickly damage the hotel's reputation.

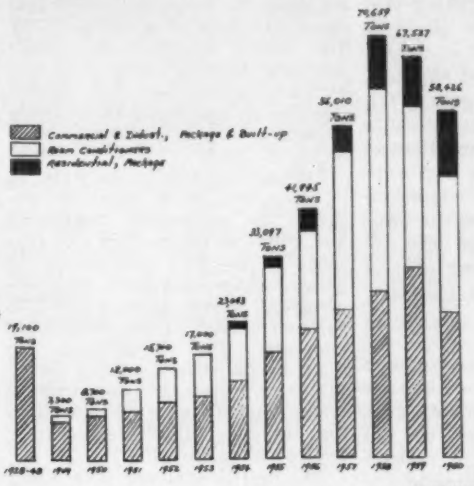
Manufacturers of equipment in the southern Florida coastal areas have always been plagued by three factors: high humidities, salt-laden air, and poor water. Through experience which has been both aggravating and costly, those who sell, install, and service equipment in those areas have gradually found solutions.

Condensing methods provide a good example. The air-cooled condenser has not moved into the picture quite as fast in Florida as it has in many others, particularly in the larger installations. There has been a feeling that even though the municipally supplied water requires a high degree of treatment, that the water-cooled condenser will provide a "certain" condensing capacity and as a piece of equipment will be less prone to rapid deterioration than an air-cooled condenser.

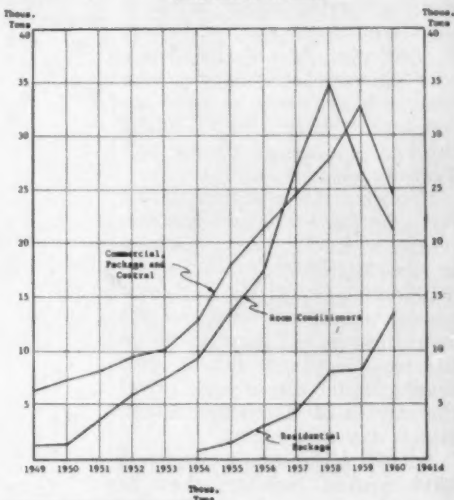
However, air-cooled condensers have come into the picture more sharply in the past two years, as manufacturers have taken note of the special requirements of the market, and as application engineering has improved.

"There's no reason for not using air-cooled equipment that's manufactured for this climate, but capacities must be figured in relation to our special climatic conditions, and this in turn often involves cost factors, both in

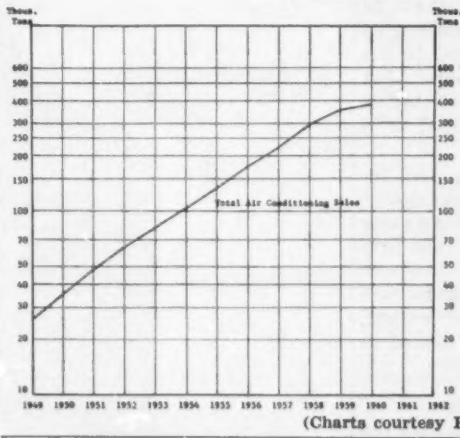
(Continued on next page)



Cooling Sales for Dade County, Fla.

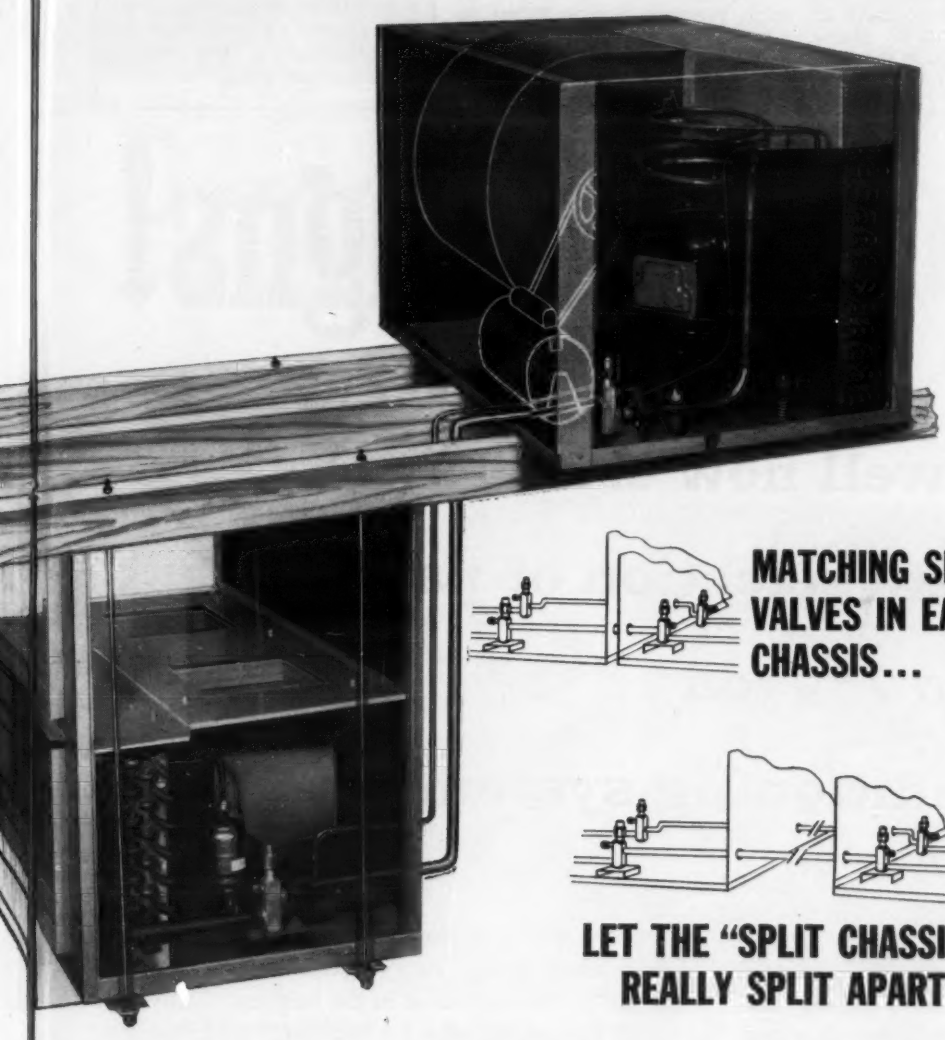

DADE COUNTY, FLORIDA
Thous. Tons
Commercial, Package and Central
Room Conditioners
Residential Package
1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961*

Cooling Sales for Dade County, Fla.

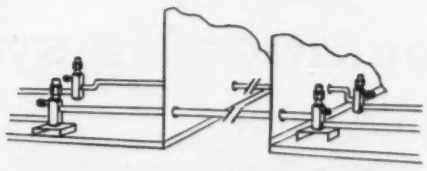


Cumulative Cooling Sales by Years for Dade County, Fla.

(Charts courtesy Florida Power & Light Co.)



MATCHING SERVICE VALVES IN EACH CHASSIS...



LET THE "SPLIT CHASSIS" REALLY SPLIT APART

UP" A BIG NEW PROFIT AREA

HE WORK OF CONVENTIONAL REMOTE INSTALLATIONS

ecutive offices. Or move the evap- general office area for a free-blow t—*indoor* remote system.) sup-markets or other low-silhou- onic V in a roof installation with g tough ceiling difusers...or with r hog the evaporator section from s the free-blow plenum. (The ten

, course. Use Adaptomatic V in or outdoors on a slab. Where attic nly e evaporator section indoors. e installations for heating-plus- ol alone.

o *exactly* how versatile Fedders ow versatile they'll make you), just

FEDDERS CORPORATION, Dept. AHRN
Maspeth 78, New York

Please rush specifications on the new 5-HP Adaptomatic V ☐ On the Adaptomatic V Heat Pump ☐ On *all* Adaptomatics ☐ Send a representative ☐.

Name_____

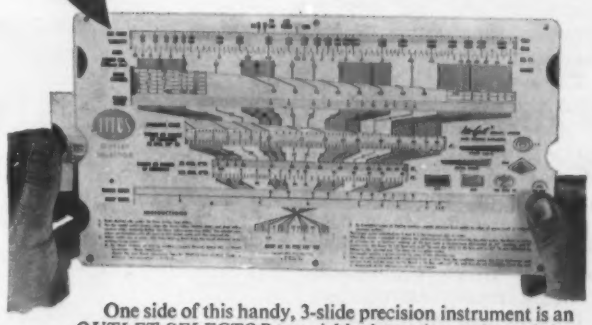
Firm_____

Address_____

City_____ State_____

NEW TITUS SLIDE RULE

Combination Outlet Selector & Air Flow Calculator for ENGINEERS & CONTRACTORS



One side of this handy, 3-slide precision instrument is an *OUTLET SELECTOR* to quickly determine outlet and size based on available space and noise criteria. Other side of rule is *FLOW CALCULATOR* to determine air flow rate for any diffuser or grille from velocity measurements in the field.

Developed by H. Straub, P.E., Director of Titus Research Laboratory. Based on over 5 years of research. 6" x 11" in size. *Furnished complete with 24-page Instruction and Information Booklet for $2.50.*

MAIL COUPON WITH $2.50 TODAY

TITUS MFG. CORP., WATERLOO, IOWA
Please send Titus Slide Rule complete with instruction booklet. Enclosed is my check for $2.50.

NAME_____

ADDRESS_____

CITY_____ STATE_____

Miami Sales--

(Continued from preceding page)

first and operating costs," says Harold A. Persett, industry veteran who is the sales engineer for O'Brian Associates, wholesaler of equipment and supplies.

A constant vigil against the rigors imposed by the climate is necessary, though, and Persett says that maintenance engineers working with the air conditioning systems installed at the Cape Canaveral missile test site report evidence of pitting of aluminum condenser fan blades.

Use of Plastic Pipe

One innovation in condenser equipment that seems to have proved itself in application in Miami has been the use of marine-type condensers making use of sea water in some of the systems serving major hotels in the Miami Beach section. Robert S. Lafferty, Sr. of Hill-York, who pioneered this work, says that such problems as were encountered have been solved through the use of plastic and Transite pipe.

Servicing air conditioning and refrigeration equipment has certainly become a major business in the Miami area, and those dealer-contractors who have continued to expand their service operations would seem to be on the most solid ground. Service trucks, radio dispatched, prowl the streets of Miami and Miami Beach day and night.

Service maintenance contracts have proved popular, they fit into the accepted pattern of "keeping things in shape" in the semi-tropical area where pest control and lawn and vegetation care are generally handled on a contract basis.

Like air conditioning and refrigeration contractors everywhere, those in Miami have quite positive ideas about the extended or so-called "5-year" warranty. These opinions are not unanimous to any extent, and could probably be placed in three principal categories:

Warranty Viewpoints

1. Those who believe that the extended warranty should be continued one way or another for a while, at least, possibly indefinitely. Those holding this opinion would like to see the warranty simplified and less costly to handle, but believe that it provides protection for both the contractor and the user in the event of any major design or manufacturing breakdowns.

2. Those who feel that the extended warranty generally is costly and a headache to the contractor, but whose major objection is that it promotes "sloppy" installation practices, because the installer feels that if anything goes wrong, the equipment will be replaceable under the warranty anyway.

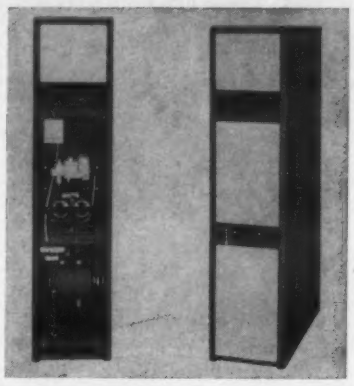
3. Contractors with a large service business who say, quite bluntly, that the extended warranty, especially without a labor allowance of considerable portion, cuts heavily into their profit from service. They are quite frank in stating that if they are to replace equipment under a warranty, they should have a labor allowance to do with as they see fit—to retain it and still charge the customer, if in their opinion the circumstances so dictate.

Adds Sectional Gas-Fired Winter Conditioner

● A compact new 50,000 Btuh input gas-fired winter air conditioning furnace has been added to the line of "Moncrief" sectional gas-fired units manufactured by The Henry Furnace Co., Dept. AH&RN, Medina, Ohio. With the addition of the new No. SH-50, this line is now available in seven capacities to 200,000 Btuh in steps of 25,000 Btuh.

"Measuring only 12 in. wide, 26 in. deep, and 54 in. high, the No. SH-50 is completely assembled and wired at the factory and features a heavily constructed 16 gauge, end-welded steel heat exchanger," it was pointed out. The furnace is said to be particularly adaptable for installations in apartments, other multiple dwelling units, motels, and added rooms where ducted winter air conditioning with individual temperature control is desirable.

The unit is available with either a belt-driven or direct-drive blower. The standard equipment 9-in. belt-driven blower, when



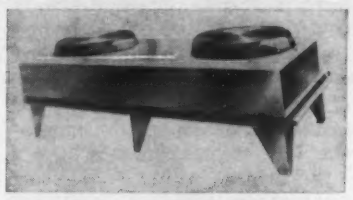
equipped with a properly sized motor, will provide air deliveries for up to 2 tons of cooling against 0.5 in. of water external static pressure, the company said. Bottom air intake is standard. Side air intake with an inexpensive accessory slide-out filter frame, which is installed inside the cabinet, is optional, according to the announcement.

Offer Horizontal, Vertical Air Flow Condensers

● A new line of air-cooled condensers that includes models for both horizontal or vertical air flow is available from the air conditioning division of Westinghouse Electric Corp., Dept. AH&RN, Staunton, Va.

For use in commercial and industrial air conditioning applications, the new units (BUVH Series) are designed for either roof top or ground level installation. Available in ratings from 20 to 60 tons, they can be used with the full line of Westinghouse type CLS compressors.

"A unique inner-fin-coil construction has permitted the design of these condensers in a new compact size," it was stated. "This inner fin coil reduces the internal volume of the condenser and, therefore, less refrigerant charge is required. The coil assures low static pressure drop with less fan horsepower and lower operating costs. Aluminum fins are mechanically bonded to copper tubes in the units and copper headers are used



throughout the new line."

The units include slow-speed, belt-driven propeller fans of the non-overloading type. An adjustable motor base is another feature.

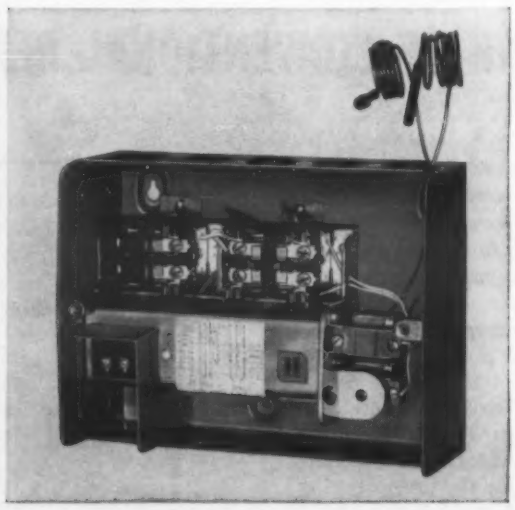
All structural members of the condensers are heavy steel angles treated with a plastic vinyl coating. All the casing panels are constructed of high-embossed aluminum sheets.

More details on the products described on these pages may be obtained by writing the manufacturer at the address given in each story.

New designs!

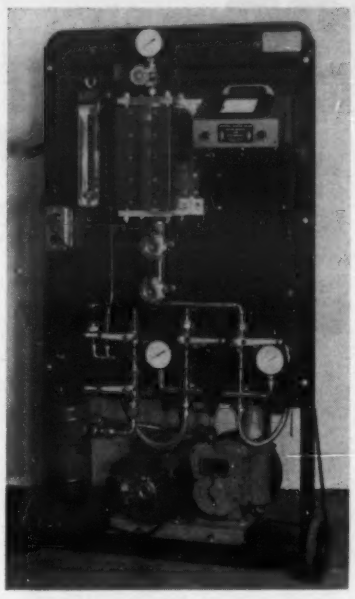
Honeywell now offers a complete selection of panels for 2 to 7½ ton air conditioning systems!

You get the latest improvements in panel design, planned to meet your equipment needs, yet avoid costly engineering and production problems. You cut down on installation time and profit-losing service call-backs because all components and electrical circuits have been standardized and simplified. You simplify ordering, stocking and inventory with single-source responsibility. And you sell *the most complete line* backed by the best name in the business. Call your nearby Honeywell office for details. Or write Honeywell, Dept.AN-6-82,Minneapolis 8, Minn. In Canada, write Honeywell Controls, Limited, Toronto 17, Ont.



PROVED R8100 series panels incorporate all components necessary to control 2 and 3 ton air conditioning systems in one compact unit! The transformer, a single or two-speed fan relay and an 18 or 25 amp contactor are all mounted on a single subpanel. Models are available with time delay, remote reset, and heat pump changeover relays. The same panel can be used for self-contained and split systems. Manufacturers can mount and pre-wire the system at the factory, simplifying dealer and distributor inventory and easing replacement problems. With the indoor fan-center panel eliminated, installation time is cut.

Portable Field Service Station Available



● A new "compact and complete" portable field service station designed specially to fit into the closed type of a serviceman's truck has been announced by Airserco Mfg. Co., Dept. AH&RN, 435 Melwood Ave., Pittsburgh 13.

Size is 26 in. wide by 17 in. deep by 49 in. high. Weight is 135 lbs.

"This model No. 4059 station is designed to properly dehydrate, degas, test, and charge a cooling unit, on the job, to today's precise standards," the company stated. "Some of its features are:

"(1) The large 3 cfm model KC-3A Kinney high vacuum pump with Airserco modified oil recovery system and smoke arrestor; (2) Airserco electric 20 mm/20 micron high vacuum gauge for continuously following the progress of the dehydrating and degassing cycle from start to finish; (3) lever operated valves on the manifold for isolating each section for full range of tests.

"(4) Two flexible metallic high vacuum-tight hoses with quick automatic cut-off couplings, and separate compound refrigerant gauges, for servicing both the high and low sides of the cooling unit either individually or simultaneously; (5) 5-lb refrigerant measuring tube; (6) rack for holding a 25-lb refrigerant supply cylinder; (7) Airserco No. 5250 refrigerant measuring tube calibrator."

900 Items Added to Fittings, Valve Line

● Addition of 900 new items to its copper tube fittings and valve line has been announced by Chase Brass & Copper Co., Dept. AH&RN, 236, Grand St., Waterbury 20, Conn.

The additions, which include a complete line of Hammond Bronze valves comprising approximately 500 items by size and shape, make available from Chase a complete line of tube, fittings, and valves, the company indicated. Among the Hammond items are heavy-duty valves meeting Federal specifications, solder joint valves for use with copper tubing, a line of heating specialties, and a standard line of gate, globe, angle, and check valves, boiler drains, sill faucets, stops, and stop and wastes.

Included in the other 400 items are: 21 new styles of cast drainage fittings, new wrought copper drainage fittings, wrought copper expansion joints, and wrought copper air chambers. Among the new sizes are: 109 wrough pressure fittings, 142 cast pressure fittings, 18 wrought drainage fittings, and 131 cast drainage fittings.

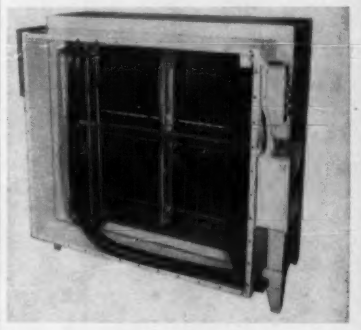
Non-Burning Flexible Urethane Foam Bowed

● Development of a new non-burning flexible urethane foam has been announced by Plastomer Corp., Dept. AH&RN, 6431 Epworth Ave., Detroit.

"The new polyurethane foam product, 'Anti-Flame,' manufactured by an exclusive formula, exceeds the requirements set forth by Underwriters' Laboratories," it was stated. "The development opens a broad new field for use of the new fireproof plastic foam in products subject to flammable conditions.

"'Underwriters' Laboratories' regulations specify that foam insulation and gasketing used in air conditioning and allied products be 'self extinguishing.' Tests conducted by Plastomer show that the new foam product is not only non-burning, but even flammable material such as paper is self-extinguishing when bonded to it."

Coincident with the development of the new foam, Plastomer Corp. has announced doubling of die cutting capacity at Detroit.



Precipitator Said To Be Self-Contained

● A new, completely self-contained high-velocity electrostatic precipitator has been introduced by American Air Filter Co., Inc., Dept. AH&RN (PD), 215 Central Ave., Louisville 8, Ky.

The Type HVSC "Electro-Cell" air filter is designed for use in inaccessible areas and for use with air handling units. It is complete with front and back duct connections, drain pan, and pre-assembled washing and oiling mechanism and is available for either floor or ceiling mounting.

"The Type HVSC Electro-Cell is available in 24 sizes ranging from 1,000 to 25,000 cfm," the company said. "All of the exclusive advantages of AAF's Type HV Electro-Cell have been incorporated in the self-contained unit. The high velocity cells are shipped in specially-designed cartons for easy field installation. Since the unit is shipped complete, installation and wiring of the Power Pack and adhesive pump and hooking up the water and drain connections is all that is needed on the job."

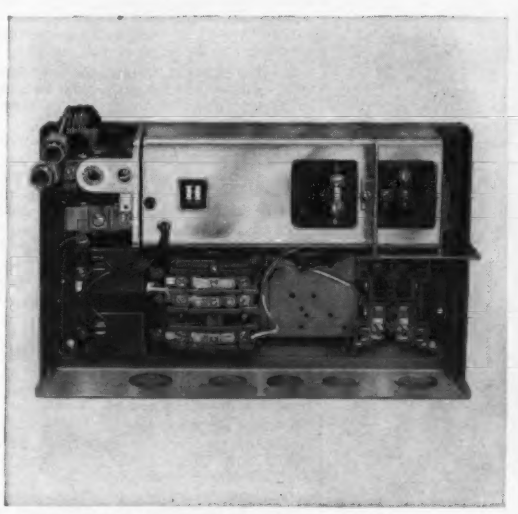
Instrument Measures Low Temp Differences

● A new development in the measurement of low temperature differences has been announced by Hagan Chemicals & Controls, Inc., Dept. AH&RN, Hagan Center, Pittsburgh 30, Pa.

"Utilizing a Hagan HO PowrLog Recorder for amplifying and recording, the instrument eliminates the need for a complex, expensive pre-amplifier when measuring very low temperature differences such as Btu output on hot water boilers or Btu removal by chilled water air conditioning systems," the company stated.

"Two standard assemblies are available. One is adjustable for a temperature difference range of 15°F to 25° and the second for a range of 50° to 200°."

Proved performance!



NEW R8200 series panels for 4, 5 and 7½ ton systems combine proven features of the R8100 series with new improvements! These new all-in-one control panels for self contained or remote air conditioning units and heat pumps include UL approvable rainproof enclosures for both the control center and high side panels. Provisions are made for the easy addition of auto-recycling overloads—used with remote reset impedance relay systems. New Class 1 terminals, for tying in a 24 or line voltage compressor protection system, are standard. And models are available with a 14 ampere, 120 volt fan relay rating.

Honeywell

First in Control

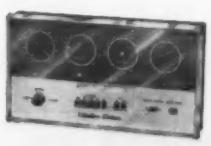
SINCE 1885

HONEYWELL INTERNATIONAL
Sales and service offices in all principal cities of the world. Manufacturing in the United States, United Kingdom, Canada, Netherlands, Germany, France, Japan.

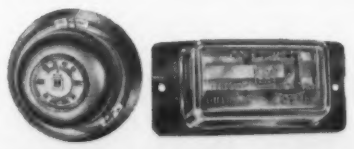
Select from Honeywell's complete line of heating-cooling thermostats

New T87 Honeywell Round—the world's most popular heating-cooling thermostat.

New T870 Deluxe Thermostat controls single or two-stage heating-cooling systems.



New Weather Station* Control Panel assures the ultimate in heating and cooling comfort.



New Y379C Indoor-Outdoor Heating Cooling Control System provides an early warning of changing outdoor weather conditions and automatically adjusts the indoor thermostat to compensate for it.

*Trademark

What's Going On in Commercial Refrigeration

News of Markets, Products, Methods

Frozen Food Program--

(Continued from Page 1)

of the workers who handle frozen foods have been only partially trained and supervised in this young, fast-growing industry and that time will be needed to correct these conditions.

"For that reason, during the remainder of this year and through next year, the Practices permit limited and realistic deviations above zero for limited periods at certain stages of handling. During 1963 and 1964, when more good equipment will be in use and the employes will be better trained, these tolerances will be tightened.

"In 1965 a further tightening will take place. Beginning then, the practices call for handling frozen foods at zero or lower all the way, except for slight deviations and limited time, when the product is in transit or changing locations."

The practices include sections on foods for freezing, warehouse equipment, warehouse handling practices, transportation equipment, handling practices for over-the-road transportation and for route delivery and equipment for retail stores and retailer handling practices. Text of the latter two follow:

EQUIPMENT FOR RETAIL STORES

1.Frozen Food Storage Facilities

a. Frozen food storage facilities should be capable of maintaining an air and product temperature of 10°F, or lower, during 1961-1962; 5°F, or lower, during 1963-1964, and 0°F, or lower by 1965, except for temporary conditions not wholly within the immediate complete control of the person or firm under whose care or supervision the frozen food is held. Any recommended or permitted tolerance in the product temperature of frozen food delivered to retail stores over and above the temperatures herein stated should automatically apply as an adjustment to all product temperature readings made at a retail outlet.

b. Cabinet type frozen food storage facilities should be defrosted as frequently as necessary to maintain refrigeration efficiency, and should be equipped with an accurate thermometer indicating a representative air temperature.

c. Walk-in type storage facilities should have provision for circulation of refrigerated air and should be defrosted as frequently as necessary to maintain refrigeration efficiency, and be equipped with an accurate thermometer, the sensing element of which should be located within the upper third of the distance between the floor and ceiling. The sensing element should not be placed in a direct blast of air from cooling unit, cooling coils, and heat exchange devices, or near the entrance door.

2. Display Cases.

a. Display cases should be capable of maintaining an air temperature of 10°F, or lower, during 1961-1962; 5°F, or lower, during 1963-1964; and 0°F, or lower, by 1965, except for temporary conditions not wholly within the immediate complete control of the person or firm under whose care or supervision the frozen food is held.

b. Frost on refrigerated coils and in air passage of display cases should be removed as frequently as necessary to maintain refrigeration efficiency.

c. Display cases should be equipped with an accurate thermometer, the sensing element of which is located in an appropriate place within the path of refrigerated air being returned to the coils.

d. The recommendations herein are conditioned upon all retailers being able to purchase from at least five large manufacturers display cases which satisfy recommended standards and meet retailers' requirements, and is not intended to suggest the replacement of display cases which are less than five years old, provided that such cases are capable of maintaining an air temperature of 15°F, or lower.

e. Product load line should be the highest point of discharge and return of refrigerated air and said load line should be designated by a distinctive line at the inside terminal ends of each display case.

f. Subject to the same conditions as in paragraph 2-d, each display case should be equipped with separators to provide false walls located a minimum of ½ in. from the terminal ends to provide for free circulation of refrigerated air between said terminal ends and displayed product.

RETAILER HANDLING PRACTICES

1. Frozen foods should not be accepted by a retail outlet when the product temperature exceeds 10°F during 1961-1962; 5°F during 1963-1964, and 0°F by 1965, provided that any recommended or permitted tolerance in the product temperature of frozen food delivered to retail stores over and above the temperatures herein stated should automatically apply as an adjustment to all product temperature readings made at a retail outlet.

2. All frozen foods received at a retail outlet should promptly be placed in frozen food storage or in display cases.

3. Each retail outlet should be equipped with frozen food storage facilities of sufficient cubic displacement to accommodate the storage of those frozen foods (except those to be sold in thawed or semi-thawed condition) that are not placed directly in display cases at time of delivery.

4. Retailers should not place frozen foods above the designated product load line.

5. Retail outlets should employ the first-in first-out basis of inventory control.

"Product Temperature" is that steady temperature determined:

1. By opening the top of the case; removing two corner packages; punching a hole through the case wall proceeding from the inside at a point coincident with the center of the first stack of packages and the first and second layer of packages; inserting the sensing element of an accurate dial thermometer, or other appropriate means of temperature measurement, about 3 in. from the outside so that it will fit snugly between packages; replacing the two corner packages; closing the case; and placing a couple of cases on top to assure good contact of the sensing portion of the thermometer stem; or

2. By using a sharp blade, or razor knife, partially cutting out a small section of the case wall in the approximate area of the center of the first stack of packages and the first and second layer of packages, slitting the cut section to allow for inserting the sensing element about 3 in. and proceeding as in the preceding paragraph.

3. Only when an accurate determination of product temperature fails without sacrifice of packaged frozen foods should representative packages, or units, be opened to allow for inserting the sensing element for temperature measurement to the approximate center of the packages in question.

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FULLY AUTOMATIC ICE CUBE MAKER AND VENDOR

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'Grocerette' Automatic Merchandising Machines Now In Full-Scale Production

LONG BEACH, Calif. — So successful were the local field tests of the new "Grocerette" automatic merchandising machines that the manufacturer, Grocerette Vending Machines, Inc., here has announced the immediate inauguration of full-scale manufacturing and sales programs.

Sales plans include the appointment of distributors and franchise operators throughout the U.S. and abroad.

"Our concept of vending is somewhat new," Grocerette President Jay Sullivan said, "in that we stress vending for off-premises consumption. Our success with the automatic vending of grocery staples has opened up an entirely new vista of commodity marketing, including the full range of products now sold in shopping centers.

"The Long Beach field test indicated both the types of locations best adapted to the machine's use, and also the foods most desired by the customers.

"Apartment houses, motels, trailer courts and other multiple-resident locations, gas stations, bowling alleys, and other recreational centers produced remarkable results.

"The heaviest demand was found to be for milk, fresh orange juice, luncheon meats, eggs, bacon, wieners, and tomato juice in the refrigerated models; and bread and baked goods, including pastries (doughnuts, cup cakes, etc.), and coffee in the non-refrigerated. This pattern of popularity held true generally at all types of locations."

Each machine has three shelves, each with a maximum of five vending tracks, and an additional shelf can be installed to add five more tracks. Each shelf is 31¼ in. long and 22 in. wide. Up to 10 different selections of food or other items can be vended by each machine, it was said.

"To handle items of varying dimensions, all the operator has to do is remove two pins move the tracks, and replace the pins," the company said. "The entire operation takes about 30 seconds.

"The machine weighs about 900 lbs, and is 76 in. high by 53 in. wide by 33 in. deep. Each model has a lighted display depicting the products being vended with the price of each item underneath. Refrigerated models have temperatures between 33 and 36°F."

The company said the National Sanitation Foundation has approved the machine's design and manufacture as conforming to its rigid standards.

Under the sales policy announced by the manufacturer, qualified companies and individuals may acquire exclusive rights to allocate machines in specified areas, or may appoint sub-lessors to handle certain districts under their supervision. Units may be either bought outright or leased from the company.

"Machines may be leased for periods of three years on a basis of $47.43 a month for the non-refrigerated models, and $50.83 for the refrigerated," it was stated. "At the end of three years the leases may be continued on a basis of $10 a month per machine, plus ½ of 1% of the monthly gross sales of the machine or $5 per month."

Victory Metal Names Rosie In New England

PLYMOUTH MEETING, Pa. —Paul Rosie has been appointed district sales engineer for Victory Metal Mfg. Corp. here, maker of "Vimco," "Sta-Kold," "Sno-Queen," and "V-line" reach-in refrigerators.

He will cover the New England territory which includes Maine, New Hampshire, Vermont, Massachusetts, and Rhode Island. Rosie was formerly employed by Foster Refrigerator Corp. and Diamond Match Corp.

Saskatchewan To Continue Quality Egg Program

Refrigeration Stressed

REGINA, Sask., Can. — Announcing that the quality egg program introduced in 1960 by the provincial department of agriculture will be continued this year, department officials stressed the importance of mechanical refrigeration on the farm as well as at retail level.

The program is designed to encourage the production of uniform high quality eggs, and the identification of uniform high quality eggs, for sale at the retail level.

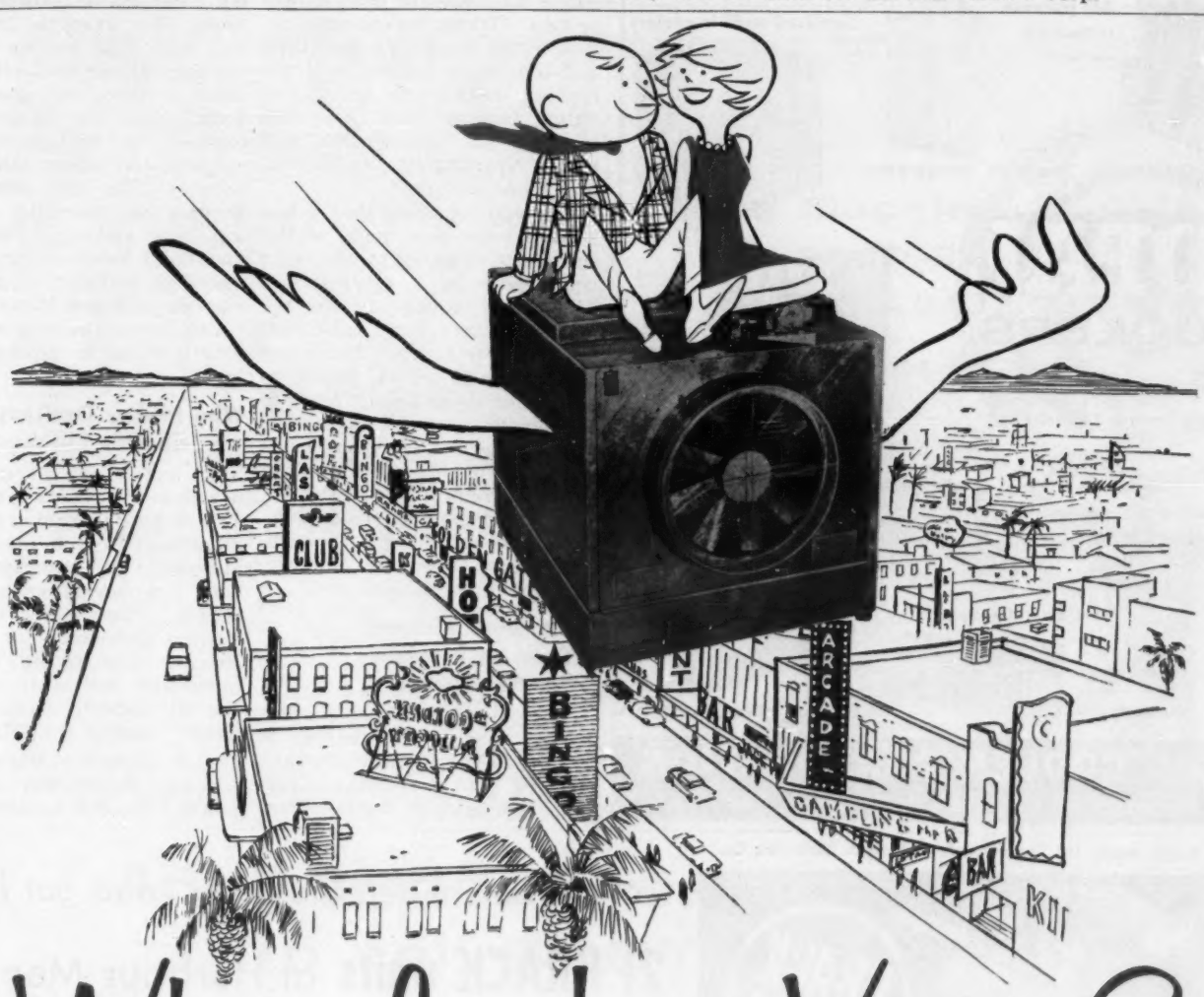
In order to qualify under the program, poultrymen must have 200 or more laying birds and must have adequate facilities for housing, feeding, and management of the flock.

"Eggs should be held at temperatures between 50 and 55°F," it was stated. "In order to obtain this temperature range in summer, mechanical refrigeration must be installed.

"Most of the large retail handlers of eggs now have cooling units—but it is felt by officials that it is just as important to have adequate cooling facilities on the farm if top quality eggs are to be produced. Cartons are marked with quality seals designed by the department so quality eggs can be identified on the retail market.

"During the past year a total of six producers, at Regina, Saskatoon, North Battleford, and Moose Jaw, qualified to market eggs under the program.

"Many inquiries have been received by the department from producers throughout the province. The greatest problem encountered by poultrymen in qualifying under the terms of the program is the maintenance of an adequate cooling temperature on the farm."



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Commercial Refrigeration *(As Hill Sees It)*

NO. 1 — Technological Trend: Multiplexing
Fixture Newsmaker: Multi-Shelf Cases
Manufacturer Problem: Price-Buying

By Frank J. Versagi

TRENTON, N. J.—What is the most significant trend in commercial refrigeration technology? MULTIPLEXING.

What will be the newsmaker in fixtures? MULTI-SHELF CASES, BOTH NORMAL AND LOW TEMPERATURE.

What is the major problem facing commercial refrigeration manufacturers today? PRICE-BUYING.

These questions and answers were the key points brought out in a multiple interview the NEWS held with executives and key personnel of C. V. Hill & Co., Inc.

Participating in the discussion were C. V. Hill III, national accounts zone manager; Harry Corbin, vice president, sales; Bob Ames, national accounts zone manager; Neil Schumacher, director of education and training; Jim Brennan, service manager.

"We can definitely say that there is a trend toward more multiplexing," stated Hill, "and stores which used to take 20 to 30 condensing units are now taking 8 to 12 machines."

"Further, there is a move away from smaller units," added Brennan. "You find fewer 1, 1½, and 2-ton compressors and more 3's, 5's, and 7½'s. A few people are even going so far as to put in four 15-ton units to handle 60 tons of load."

Some Chains Still Refuse To Multiplex

Even though the trend is definitely toward multiplexing, suggested Corbin, there are chains which insist on sticking with single machines for each fixture or two. "Some, for example, refuse to use anything bigger than a 3-ton unit; others will use nothing but 2-ton and 3-ton units, because this simplifies stocking of replacements and makes repairing simpler because it is more uniform."

Schumacher noted that a few studies have been made of the economics of going to one large compressor in a supermarket. "I've seen studies where the original cost was calculated down to every copper fitting and nut and bolt which would be used. But there doesn't seem to be enough potential savings to warrant the risk of depending on one unit for all a store's refrigeration, even though it is reasoned that such a larger compressor would be more precision-built than assembly line-produced smaller compressors."

Multi-Shelf Fixtures Seen as Problem For Servicemen

Bob Ames predicted forcibly that "tomorrow's stores will be outfitted chiefly with multi-shelf fixtures, both in frozen and normal temperature cases. Very few new ideas have received the enthusiastic reception from supermarket merchandisers that the multi-shelf case has."

"And this poses a problem for the service industry," interposed Schumacher, who, with Brennan, had more to say on service and training later.

"Measuring merchandising effectiveness is not always easily done. The chain people may react to a new fixture in completely different ways," offered Hill III. "For example, the combination cooler and display case which employs an air curtain: One chain has experimented with them and rejected them; another chain in the same area experimented with them and has decided to incorporate them into all its new stores."

The combination cooler-display cases seem to contradict good merchandising practice report some of the company's accounts. "We normally place merchandising emphasis on slower moving items. For example, in a normal dairy line up, we will put the eggs at one end, milk at the other to force the customer to walk along the cases and be exposed to the cheeses and spreads and other dairy items between. The air curtain-type fixtures are normally used to sell milk and eggs, which we find don't need merchandising; when we attempt to move the smaller packaged items through such a fixture, there is no noticeable increase in product movement."

Who Makes Decision In Chain's Purchases

The role of the merchandising people in the chains can be decisive in getting equipment sales, all of the Hill spokesmen agreed, although the situation differs with the several national accounts. "Sometimes the engineering department or the purchasing department or some particular individual can have the life-or-death decision in his hand," recalled Hill III.

"Unfortunately, when the purchasing department has full power," the Hill spokesmen contended, "we more frequently run into the problem of price-buying. Orders for tens of thousands of dollars will be decided, not on the basis of quality, not on the basis of specific features, but on price—down to the last nickel." Price-buying seems to be on the increase, they agreed, although there seem to be cycles. "One area will become price buyers, grow out of it; then another area becomes a problem."

One important unfortunate result of price-buying, the company feels, is that it forces the entire commercial refrigeration industry to attempt to cut costs. Since costs can be cut only so far, the industry is then forced to remove or omit from its products certain features which are important for optimum performance. "Not gimmicks, but important features."

"We mustn't get the idea that the picture is all black," cautioned one spokesman. It is important to remember that the two companies leading in commercial refrigeration sales, of which we are one, also have the highest prices in the industry. People can be educated to realize that they get quality when they pay for it."

"Of course, to maintain this leadership," added Ames, "we must constantly be developing new products, improving quality. We must come to the food industry with new ideas; if they have to ask us for something, then it's too late, because they have asked our competition, too. And it's a never-ending process. There are more followers than leaders. It isn't very long after you introduce a new product that you have copies competing against you, so you come up with something new."

Skilled Servicemen Needed

Schumacher and Brennan, at this point, swung the conversation back to service and training for service.

"There is no doubt about it," said Schumacher, "the supply of skilled workmen for installation and service is dropping."

How has this come about, asked the NEWS, in view of the tremendous efforts on the part of manufacturers and some societies to offer education and training?

Training Lacks Comprehensiveness

"One of the most important factors," he offered, "is that contractor-employers, in their hurry to train a man for profitable use, concentrate on his being able to solder lines. 'How fast can he run tube?' seems

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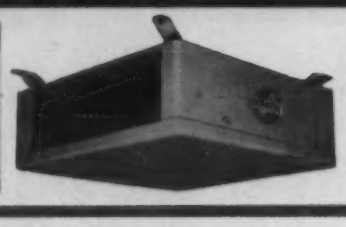
Dressed beef being conveyed from slaughter room to chill room.

At right, one of nine KRACK F1700ST ceiling units hold room at constant temperature, humidity level.



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21 KRACK units at Harbour Meat Co. **hold temperatures from -15° to +52°**

... according to Mr. Glenn Harbour, manager and partner, their meat packing plant in Tucson, Arizona, was designed and built from the ground up to assure retaining of meat quality through proper processing, cutting and aging. "Quality is extremely important—we raise our own prime beef and want to make sure it gets to customers in top condition. Since refrigeration can mean the difference between good and bad meat, we had to have units that would hold temperatures dependably, at reasonable cost. We found that KRACK standard production units filled our specifications to the letter."

Equipment installed

1 Ceiling mounted unit cooler—FA750F
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to be what they are primarily interested in. Such men are trained to handle a tool box, rather than to understand what they are doing."

"Without any exception that I can think of," joined in Brennan, "our successful distributors have got a *top man,* one man in the organization who is knowledgeable about the theory of refrigeration, who reads manufacturer's literature when it comes, who can answer most of the questions tossed at him by the men doing the work. Without this competent service manager, the organization is weak."

In an attempt to increase the number of such qualified men, C. V. Hill wages an aggressive and intensive educational campaign. In the eight months preceding the NEWS interview, for instance, Schumacher had visited 90% of the company's dealers and close to 75% of its chain accounts holding training meetings.

Why Multi-Shelf Fixtures Call for Better Service

"The reason I said that the new multi-shelf fixtures will call for better service," explained Schumacher, "is that—unlike a normal display case which will hold its cold air for hours after a unit becomes inoperative—the multi-shelf fixture loses refrigeration immediately when something goes wrong; there is nothing to hold the cold air around the product."

The company has made arrangement to supply Kinney vacuum pumps to chains and distributors, at no profit to C. V. Hill, in its desire to increase the practice of proper evacuation.

In so far as it can, its servicemen do not "put fires out." Instead, they attempt to teach, train, show the chain's or distributor's serviceman how to think problems through, so that he does not depend on someone else to solve his problems.

Some of the other points which came up:

- The company's experience with Refrigerants-12 and 22 has not been such as to cause it to favor one exclusively.
- Properly controlled, air-cooled machine rooms are efficient and seem to be growing in popularity with the trend to use larger, but fewer, condensing units.
- The company has its own field engineer drop in twice during an installation to assure that its recommendations are being followed.
- The commercial refrigeration industry would do itself good if it could bring itself to lay the blame, and financial responsibility, for improperly installed systems where it belongs —on the one who ignored or countered recommended procedures.

Study Indicates

Air Stream Across Door Opening Cuts Refrigeration Loss for Storage Rooms

ST. LOUIS—Research on refrigeration losses through openings from cold storage rooms has been conducted in the Dept. of Agricultural Engineering & Food Science at Michigan State university, East Lansing, under the direction of Professors Carl W. Hall and T. I. Hedrick.

Latest findings, reported in the Quarterly Bulletin of the Michigan Agricultural Experiment Station, show that losses are reduced sharply when openings are equipped with units that send streams of air across the doorway, it was pointed out by American Air Curtain Div., Universal Match Corp., here.

While the advantage fluctuates with the size of the opening, the power of the air doorway unit and other factors, losses through a standard air unit are only about one-tenth of those through an unprotected opening, the studies show.

The latest project was conducted by Gad Hetsroni, for his master's thesis, under Dr. Hall. They explained the importance of the study this way:

"Frequent opening of the conventional door on a refrigerated storage causes air changes inside cold storages, resulting in refrigeration losses and in increased load on the compressors. Large losses are very costly and frequent opening may prevent the refrigeration unit from reducing the temperature of a new load."

In an earlier project at the university—by R. M. Williams, another graduate student of Dr. Hedrick and Dr. Hall—new insight was gained into the nature of losses from refrigerated storage spaces that are fitted with conventional doors.

Williams's research indicated it was not uncommon for 50 lbs of water to be present in the warm air drawn into a medium-sized cold storage unit through normal use of a conventional door during a single hour.

Losses caused by this influx include the approximately 200 Btu needed to freeze every pound of the water, the Btu necessary to melt the ice during defrosting, and the other expenses of defrosting.

In the recent project, Hetsroni installed an "Air Curtain" doorway unit in a 7.75-sq ft opening between two well-insulated chambers. One chamber was maintained constantly at 40°F, the other at about 85°.

It was found that "the overall heat transfer coefficient is proportional to air velocity and inversely proportional to the depth of the curtain for the velocities tested."

Hetsroni used a model of a standard six-nozzle "Air Curtain" doorway unit, furnished by the manufacturer.

Describing the workings of a doorway installation, the article in the Quarterly explained that a "unit consists of a series of nozzles above the entrance which discharge a stream of air downward to an air return grille in the floor. The air is recirculated through ductwork which contains heating and cooling elements, filters and fans. The curtain of air insulates the interior from outside temperature, dust, insects, fumes, etc."

THE BOSMAN® CONTROL For NEW PROFIT sell this patented comm'l refrigeration Control. Owner dials safe lower temperatures, higher humidity, yet has frost-free coils. Replaces timers, pressure control guessing. Write for Bulletin "B". BOSMAN, 613 W. Washington, Chicago 6, Ill.

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This lineup of new Scotsman Ice Machines is undergoing a rigid test run at Scotsman's big plant in Albert Lea, Minnesota. Hour after hour, these Scotsman machines produce hundreds of pounds of ice. During this test, every working part is checked and rechecked to see that every unit is in perfect working order.

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This careful attention to the production of Scotsman Ice Machines is only the first link in the chain of Scotsman service. Scotsman backs up its top quality machines with a sales and service group second to none in the industry. And to help you sell Scotsman Ice Machines, a giant advertising and merchandising program promotes faster sales and bigger sales to more and more markets!

Do you qualify for the Scotsman franchise so highly prized in the ice machine industry? Mail in the coupon today and get full information.

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EXPORT OFFICE: 15 William St., New York, N.Y.

Discounting Receivables (1)

Here's a Source of Extra Money You May Be Overlooking If You Need More Capital To Carry You over a Rough Spot

By George M. Hanning

Need more working capital to tide you over a rough spot?

If you have a basically sound business—not one wobbling on its last legs—you can borrow money against your accounts recivable.

How? See your banker. If he can't or won't help you, try a commercial finance company, if your borrowing needs will average more than $20,000 per month.

Special NEWS Report

Both these institutions are ready and willing to help you. They are not competitive — except among themselves — for your business, however. The banker will invariably offer you the lowest rate of interest.

The commercial finance company cannot compete on that basis. Its rates are admittedly high. But the finance company can come in where Federal and state laws or an individual bank's policy prevents the bank from giving you what you want.

For example, your net worth might not be sufficient to justify the size loan you need, in the banker's eyes.

In some cases the bank and commercial finance company will work together to help you. In others the finance company may be able to do the best for you on its own.

What can they do for you and how much will they let you have for how long?

The specific answer to that question will depend on the individual bank or firm you do business with. However, a general idea of what you can expect is offered by officials of a large midwestern bank and of a nationally active commercial finance company, James Talcott, Inc.

These officials, interviewed by the NEWS, emphasized that the plan offered would be tailored to the specific needs of the individual seeking the loan.

It would depend on what he needed the money for, the nature of his business, the nature of his accounts receivable, the financial condition of his firm, and his ability to repay.

The banker said that, depending on these variables, the bank would loan anywhere from 50% up to 80% of the value of the customers *acceptable* accounts receivable.

What Are Acceptable Accounts Receivable?

Generally speaking, current accounts are acceptable. Not acceptable are the following types of accounts:

1. Old accounts—those that have been on your books for what the bank considers an unreasonably long time. For durable goods, that would be 90 days or more, unless, of course, the agreed upon payment terms extended beyond that time.

2. "Disputed" accounts — those in which customers are withholding payment pending adjustments or settlements of complaints.

3. Accounts subject to offset —those to whom you owe money. For instance, you may have sold an air conditioner to a printer who does work for you. If you owe him money for printing at the same time he owes you money for the air conditioner, his account is not acceptable to the bank.

4. Accounts that are not good credit risks. If the account has a poor credit rating and owes considerable sums to others, his account is not acceptable to the bank, even though his credit with you is good. The chances that he may default in the future are too great in the banker's eyes.

As can be seen from this enumeration of non-acceptable receivables, the bank will go over your receivables list with a fine tooth comb before lending any money on them. In addition, the bank will demand a periodic current list of your receivables as often as it deems necessary —once a month generally.

Having thus determined how many acceptable accounts you have, what determines how much the banker will loan against them?

The quality of your accounts receivable is one factor. If, for instance, all of your accounts have good credit ratings and a long reputation for prompt payment, the bank will loan up to 80% of the value of your receivables.

But, alas, if you happen to be a contractor or a subcontractor, when it may take weeks to complete an installation and an indeterminate amount of time thereafter to collect your money from the owner or general contractor, the bank might only lend you about 50% of the value of your receivables — or possibly 60%.

How Much Do You Pay?

What sort of interest will you have to pay on such a loan?

Again, that depends.

First, it depends on the state of the money market. If the money market is "tight" and available funds are scarce, interest rates will be up. If plenty of money is available for such loans, it will be lower.

Right now, this particular bank would charge somewhere in the area of 5½% simple interest (5 to 6%).

Your relationship with the bank would be another factor affecting the rate you pay. As this banker explained it:

"We don't make loans of this type for the interest income alone. We want to build up an account relationship with the customer.

"We would offer better terms to a customer who carries a large balance in our bank that we can make money off of than to one who carrieis a small balance that provides little income or costs us money to service."

How about repayment?

This can be done in a number of ways, the banker said, depending on your needs and abilities.

The loan can be set up on a revolving basis so you can draw what you need when you need it and you can reduce or completely pay the loan at any time.

Also the loan can remain at any constant level so long as there would be sufficient acceptable accounts to properly collateralize the loan.

Arrangements can also be made for you to borrow the entire amount and repay it over monthly intervals for a specific number of months. Or you can repay it in a lump sum at a specific date.

In any case, interest is computed on the actual amount of money borrowed for the actual time it is used.

It's Good Business

From the banker's point of view, loaning you money on your accounts receivable is good business. He does a lot of it. At this particular bank, 10% of its commercial loans were against accounts receivables and amounted to 4% of the dollar volume of commercial loans.

While he admits that there is more risk to him in this type of loan than in an unsecured loan (if you could get an unsecured loan, you wouldn't be borrowing against your accounts receivables), he looks at it as a top rung secured loan.

He offsets the added risk by keeping a close watch over your accounts receivable. As long as your business moves normally, he breathes easily. But when he sees things beginning to go badly for you, he prepares to act to protect himself.

And because he may see the danger signals before you do, his prodding should alert you that it is time to protect yourself, too.

(To Be Continued)

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Mueller Climatrol Slide Presentation Offers Flexibility

MILWAUKEE — Mueller Climatrol has announced the availability of a new slide presentation program for the use of its dealers to sell prospects.

Included in the program is a special slide viewer and series of slide programs, complete with a presentation outline.

"The slide method," Mueller Climatrol said, "will enable our dealers to prepare and insert into the standard slide programs, views of their place of business and installations.

"Our standard programs will enable Mueller Climatrol to prepare a general presentation of the benefits of good year-round climate control plus an individual set of specific items."

Mueller Climatrol dealers are also offered the opportunity to purchase any item he needs to prepare his own slides for this program. Two different camera outfits and various slide films are offered as optional items.

Mueller Climatrol also offers its dealers a slide duplicating service for slides which they shoot locally and replacement slides for the program.

Wolverine Booklets Outline Division's 'Buy American' Policy

ALLEN PARK, Mich. — Two booklets available from Wolverine Tube, Div. of Calumet & Hecla, Inc., 17200 Southfield Rd., Allen Park, Mich., outline the division's long-established "Buy American" policy for equipment and production material.

Wolverine Tube said the recently-published booklets, "Management Must Act" and "Suppose It Happened to Us?", also detail "why and how industry in general should join forces in this philosophy of business."

Sales Presentations (4)

Differ for Architects, Consultants, Contractors

John O. Roth, marketing manager for Dunham-Bush, West Hartford, Conn., frequently writes sales training lessons for distribution within the company. Some of Roth's material is of such general interest that the NEWS publishes pertinent portions here. Especially of interest is the slanting of sales presentations toward consulting engineers, architects, and contractors. In this fourth instalment Roth discusses sales to architects.

●

Selling Architects

The next individual whom we will consider in terms of specific interests is the architect. The architect is also interested in facts and figures, is price conscious, is interested in technical details. But, primarily, he is interested in styling and appearance of the equipment.

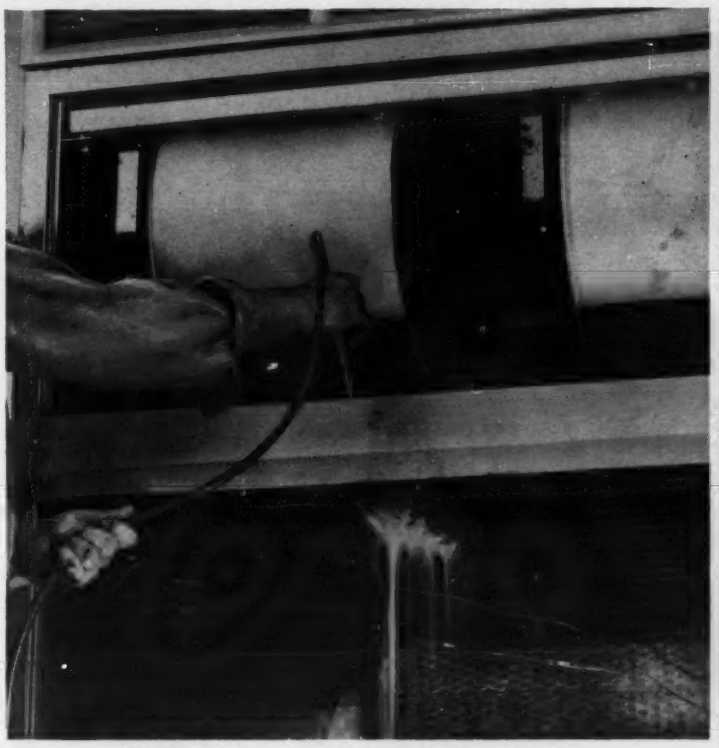
The symmetric over-all appearance of your product, its finish, color, dimensions, these factors influence his thinking—and his buying. He is especially impressed with the compactness of a product. If you can quote the square-foot area your product will occupy, and prove that it is richly deserving of such space, you will command his attention and respect.

Next to appearance and compactness, the architect is concerned with the reliability of your product. Does your product enjoy a good reputation? Is its manufacturer equally well thought of in the field? The material and workmanship going into your product will be of especial concern to him. Endurance and longevity of the parts are studied by the architect.

The architect will also weigh the prestige factor where your product is concerned. If your company has received national, sectional, even local acclaim in competitions, calling his attention to such honors will aid your cause materially. He will be impressed by advertisements appearing in nationally known publications. Any mention of your product editorially, of a favorable nature, which is made in a professional journal will be of interest to him.

And it will prove especially beneficial if you can provide him with a listing of those who have used your products successfully in the past. The architect prefers dealing with those who purvey products possessing prestige. Installations which have been completed satisfactorily provide this prestige, and if you can make it possible for him to visit such installations, this, too, is apt to prove well worth while.

(To Be Continued)



New CalClean is easy to use—spray on—rinse off.

Upper left is CalCleaned—grease and dirt gone.

new CalClean lets you spray dirt and grease away!

clean finned cooling coils the EASY Calgon way

Finned coils that are coated with grease and oil-bound dirt cannot function at top efficiency. Airflow is impeded and heat transfer is lowered. Now, CalClean makes the job of cleaning such equipment simple and easy. CalClean is a heavy-duty liquid detergent that is high-powered, yet so safe you can use it to wash your hands. It destroys grease and tar residues by chemical action—*not* by just flushing it away. Here is how easy it is to use CalClean:

1. Spray solution on surfaces to be cleaned—let stand for five minutes.
2. Flush with clear water.

That's all there is to it. The heaviest grease and grime can be removed with a solution made up with five parts water and one part CalClean. CalClean is not only the most effective cleaner for finned coils—it is the most economical because you dilute it with FIVE parts water.

CalClean can be used on finned coils of all kinds—evaporator coils, window units (cover fan motor with plastic to keep windings dry), air cooled condenser coils, heating coils, permanent air filters, or on any other greasy equipment that is not affected by plain water. It is fine for cleaning equipment in food plants and stores.

CalClean is one of the quality Calgon products—which include Calgon® Scale Remover, Micromet® Plates and the most complete line of other water treatment products. Ask your refrigeration wholesaler about CalClean or any of the Calgon line.

The No. 300 CalClean Sprayer is a low cost sprayer designed specifically for use with CalClean. Large air pump in 3½-gallon tank saves time. It's easy to reach hard to get at places with the 20-inch extension tube and 10 feet of hose.

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N. Y. School Offers Air Conditioning Degree In Two Years

NEW YORK CITY — The board of regents of the University of the State of New York has authorized a change in name and objective of the New York Trade School.

The school is now known as the Voorhees Technical Institute in honor of the chairman of its board of trustees, Enders M. Voorhees.

In establishing its new objective, the board "has been mindful of the nation's increasing demand for college trained technicians," it was stated. "The new institute will, therefore, offer two-year courses leading to the Associate in Applied Science Degree in Air Conditioning Technology, Electronics Technology, Lithographic Technology, and Materials Processing Technology. High School graduation is a prerequisite for admission in classes which will begin in September."

The institute is located at 304-326 E. 67th St., Manhattan.

Delco Buyers Guide

ROCHESTER, N. Y. — Delco Appliance Div. is offering a free buyers guide to home heating and cooling as part of its promotional program for "Comfort by the Houseful 365 Days a Year."

The 16-page booklet printed in full color supplies answers to many of the "most asked questions about heating and air conditioning," the company said. It discusses cooling for both the new homeowner and the remodeler, benefits, and describes in detail various units in the complete "GM Delco 365 conditionair" line.

Priced at $13,990

350-Home Project To Have Air Conditioning

PORT JEFFERSON, L. I., N. Y.—A $5 million project of 350 homes being built here by Ole Towne Estates, Inc., will include central air conditioning as a standard feature.

Builder Sigmund Schwartz said he has launched the project because he believes that "soon homes without air conditioning will be obsolete."

The L-shaped ranch houses in the new development, Schwartz said, have been priced at $13,990. The price includes Bryant gas-fired warm air heating and central air conditioning.

The warm air heating and air conditioning systems will be installed in compliance with the rigid Code of Standards of Long Island's Climate Control Council, according to Joseph Frederick, president of Sheet Metal Workers Union Local #55 and chief labor member of the council.

ARTHUR TOOMEY (left) and Everett Andersen, Local #55 sheet metal workers, installing compact Bryant gas furnace and air conditioning unit in "first development of low-priced Long Island homes to include both warm air heating and air conditioning as standard features." Inspecting work are Sigmund Schwartz (right), of Ole Towne Estates, Inc., Port Jefferson, L. I., N. Y., the builder, and Gordon Baker, president of Bryant Air Conditioning Contractors, Inc., Island Park, the installing contractor.

Frederick praised Schwartz company for bringing homes with central air conditioning within the reach of those who buy only modest priced homes.

"This means," he said, "that the very workers who are building this development can now afford air conditioned homes."

Gordon Baker, president of Bryant Air Conditioning Contractors, Inc., who will install the warm air heating and air conditioning, said the Schwartz development is a "major progressive step" for warm air heating and air conditioning in the one-family home market.

Del Washburn, Bryant vice president, who will be in charge of the installations, pointed out that the council-approved installations will have the same Seal of Certification and Certificate of Guaranty as units in expensive homes.

Schwartz said the model of "The Continental Ranch" has been completed and is now ready for inspection. It is located on Nesconset Highway, Port Jefferson Station. The three-bedroom ranch has a true center hall, from which all rooms open, and a basement, it was noted.

Schwartz said the house has double insulation of Owens-Corning Fiberglas.

DO YOU REMEMBER THAT SEPTEMBER AFTERNOON?

The hottest day of the year! And the air-conditioning conked out. The office was sweltering — tempers short — nothing accomplished — might as well have gone home. Sure, I knew that the cooling water should be chemically treated but the air-conditioning system had been working beautifully, and I just kept putting it off — then that extra 10 degrees of heat was just too much. The repair bill was bad enough but the two days it took to repair the system was unbearable.

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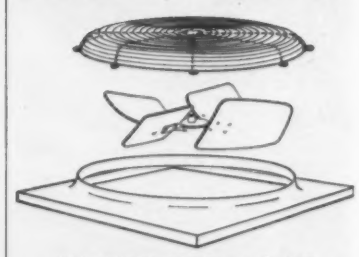

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'Twin Tilt' Allows Housewife To Clean Window Without Removing Conditioner

HY NEWBERG, general manager of M. Lifsher & Son, Pittsburgh home improvement dealer, shows how easy it is to reach all portions of the converted Twin Tilt window, inside and outside, top and bottom, when installed with an air conditioner.

* * *

PITTSBURGH—M. Lifsher & Son, local home improvement dealer, reports increased sales of "Twin Tilt" windows due to careful follow-up of leads supplied by air conditioner wholesalers and dealers.

Hy Newburg, general manager, noted that many of his customers who owned air conditioners installed in double-hung windows complained because they were unable to clean a portion of the window.

"Careful housewives objected to dirty windows in living rooms or bedrooms," it was pointed out. "This frequently led to costly removal and storage of air conditioners for the winter season so that the window could be properly cleaned."

The installation of Twin Tilt hardware in such cases is said to solve the problem. Converted windows permit the easy cleaning of the inside and outside of both upper and lower portions of the window without the necessity of removing the air conditioner, according to Twin Tilt Window Hardware Co. here.

"Conversion of a double-hung window to a Twin Tilt takes less than an hour," the company said. "In cases where the appliance dealer wants to buy the conversion hardware and install it himself, an air conditioner installation man can be trained to install it in a minimum time. Cost of materials depends on size, local conditions, etc., but can generally be expected to be between $10 and $15."

Carrier Pocket Calculator Figures Cooling Load Requirements for Room

SYRACUSE, N. Y.—Carrier Air Conditioning Co. has developed and made available to dealers a new pocket-size calculator which "enables salesmen to calculate quickly and accurately the cooling load requirements for any room."

"By making two settings based on the number of windows and the direction they face, the size of the room and its exposure to the sun and heat gain through floor and ceiling, salesmen can instantly determine the amount of cooling needed to air condition the room," the company said.

Designed to fit into the salesman's inside jacket pocket, the slide rule measures 4½ by 8½ in. and is coated with plastic to resist soiling. Directions and an

illustrated example are printed on the back so a salesman can become familiar with its operation in a few minutes of practice, according to Joseph Dougherty, Carrier room air conditioner sales manager.

Airtemp Names Outlet In Western Michigan

DAYTON—Air Temperature, Inc., Grand Rapids, has been named distributor for Chrysler room air conditioners in western Michigan.

T. W. Kirby, vice president-marketing for Chrysler's Airtemp Div., said the two-year-old firm would also continue to handle Chrysler packaged heating and cooling products. Air Temperature, located at 18 Weston, S.W., joined Chrysler as a packaged distributor in 1960.

Its territory for room air conditioners includes Grand Rapids, Kalamazoo, Battle Creek, Muskegon, and Traverse City.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

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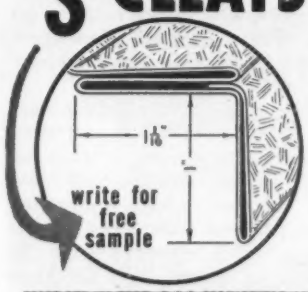

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TECH CENTER

by *FRANK J. VERSAGI*

Heating, Cooling & Refrigeration In Supermarkets

Part 2

(From a talk given before the Jacksonville, Fla., chapter of ASHRAE)

Air conditioning, then, is desired by most commercial refrigeration manufacturers, even though, as we will discuss in a moment, air conditioning can pose a problem rather than solve one.

Generally speaking, C. V. Hill's evaluation is accepted. "Properly designed store air conditioning can provide a major reduction in the refrigeration load. A reduction in store temperature from 85° to 75° can mean as much as 8-10% reduction in the refrigeration load.

A reduction in store humidity from 65 to 45% relative humidity in a 75° store will reduce the refrigeration load for the open display fixtures by 15-20%."

So we see that commercial refrigeration fixtures are affected by these several factors.

Tyler estimates that the total heat load on an open display case can be broken into fifths, with about two-fifths coming from radiant sources, another two-fifths from diffusion and air change loads and the remaining one-fifth due to wall leakage and product load.

Most commercial refrigeration manufacturers agree, too, that humidity should be maintained at a maximum of 55% during all periods of the year. A major point of contention here is the frequent oversizing of air conditioning systems which leads to poor humidity control.

Recommendations For Designing a Supermarket

Admittedly with its own interests in mind, Tyler makes these five recommendations in designing a supermarket:

- 1. Design for 25 fpm maximum air velocities around open cases.
- 2. Design so that humidities may be maintained at a maximum of 55%.
- 3. Consider both heating and cooling needs.
- 4. In planning the store layout, avoid large concentrations of vertical display cases in a small area.
- 5. Consider air distribution with respect to sales refrigerators.

I have been in on discussions where these sort of recommendations brought forth reactions from air conditioning engineers or contractors to the effect that "You would think there is nothing else in the supermarket as important as the commercial refrigeration fixtures."

Frankly, gentlemen, nothing else in a supermarket *is* as important as the commercial refrigeration fixtures. Sure, heating and cooling contribute to customer comfort, but the customer comes into a supermarket not to seek comfort, but to buy food, so that to this extent at least, the commercial refrigeration manufacturers are justified in insisting and pleading that the heating and cooling systems be designed with refrigerated display cases in mind.

Let's switch emphasis for a moment.

We have seen what kind of effect air conditioning can have on refrigerated display cases.

Effect of Refrigerated Display Case on Air Conditioning

What about the effect of refrigerated display cases on air conditioning. Specifically, can any credit be taken for the cooling effect of several hundred feet of refrigerated cases when sizing an air conditioning unit?

Here the engineering opinion is divided as sharply as it is on Refrigerant-22. Quoting the late John Spence, "There is so little heat removal from the air in the store by present day refrigerated merchandising fixtures that it must be considered negligible. In fact, I doubt seriously if it could be measured."

Quoting Don Friedman, chief engineer of Hussmann Corp., "The net effect of a frozen food case on store air conditioning is less than 156 Btuh per foot of case for a frozen food fixture. This is such a small amount that it generally can be omitted from most food store air conditioning calculations."

Countering this statement is Art Perez, chief administrative engineer of the Tyler Corp., who says, "It is not unusual these days to find even a small store with 30 hp in the machine room that serves commercial refrigeration equipment. An average for a new store would probably be more like 45 hp. Load calculations based upon machine capacity charts would quickly lead one to conclude that if all machines were running all of the time, heat extraction from the store would amount in tonnage to about 50% of the horsepower. Hence a store with 30 hp would have a heat extraction of 15 tons from the sale area of that store.

This is definitely a generalization and is based on several unlikely presumptions such as continuous running time. A more conservative estimate than might be an actual heat extraction of about 10 tons would occur."

Pointing out the need for individual calculations, if accuracy is desired, Perez suggests as a rule-of-thumb that each horsepower of condensing unit serving perishable equipment would extract an average of one third of a ton of heat from the area in which such a refrigerator is placed.

"Failure to allow for credit will result in oversizing of air conditioning systems which then, during mild times of the year, will operate under very little load and hence high coil temperatures and extremely poor humidification." Perez goes on to suggest that the air conditioning system should be designed either in multiple units or in such a fashion that the machine and the coil both may be unloaded as air conditioning requirements are reduced.

A third authority, entering this discussion, adds that additional data indicates that in normal temperature equipment as well as frozen food equipment removes about 150 Btuh per foot. Thus, 200 lineal feet of open display cases would remove from a store approximately 3,000 Btuh of sensible heat and, depending upon the relative humidity in the air conditioned store, 3,000-6,000 Btuh of latent heat is also removed.

High Sensible-to-Latent Percentage of Heat Removal by Open Cases

"This high sensible-to-latent percentage of total heat removal by the open equipment will reduce the final total load on the air conditioning system," he admits, "but at the same time the latent load goes from perhaps an original design of 33% of total heat up to as much as 40% of the total heat to be removed. When this happens, in order to bring the store conditions to designed temperature and designed humidity, it can be done only with a lower refrigerant temperature to give a lower coil surface temperature.

"At this lower refrigerant temperature, as large or larger a condensing system is often required as that which would have been the case where no refrigerant fixtures considered in the design." This authority says "It is true, of course, that air handling and coil system could be reduced in theory, but experience has shown that the most practical answer today is to use normal air conditioning design standards as if there were no open equipment, and to throttle the expansion valve as needed to reduce the evaporator temperature and increase the ratio of latent heat removal."

We have introduced now this factor of the relative significance of latent and sensible heat. Related to this is a statement made by one authority that radiant heat in non-air conditioned stores throws a greater load on the refrigerated open self-service merchandising fixtures than sensible heat. Some engineers, too, stress that the relationship between sensible

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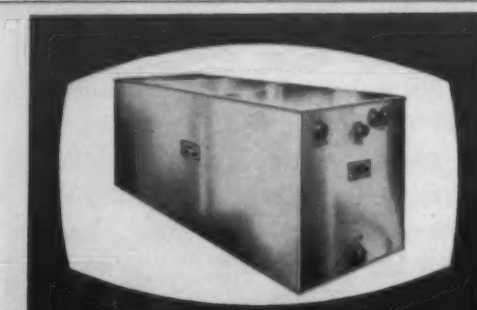

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Heating, Cooling, Refrigeration--

(Continued from preceding page)

and latent heat varies as radiant heat conditions vary.

In one of its bulletins, Tyler Refrigeration insists, however, that "Speaking purely of heat gain or heat extracted from an area, the amount an open refrigerator extracts can be measured by running time and average machine capacity based upon average running back pressures. Such heat is picked up by the refrigerator, by radiant, sensible, and by latent means; regardless of the means, Btu are nevertheless involved, and such heat represents the energy as removed from the area in which the refrigerator is located."

The Tyler bulletin uses as an example a 45-hp store, and breaks this down into three categories:

One: 20 hp for low temperature equipment operating at back pressures of 5½ in. of mercury. Tabular data indicates a heat-removing capacity for this 20 hp equal to 52,800 Btuh.

Two: 15 hp for normal refrigeration operation. These machines operating at an average back pressure of 15 lbs indicate 100,000 Btuh heat removal. The remaining 10 hp, used for produce, meat, and dairy coolers and cutting room, are not considered a factor in the heat removal from the store area.

"One qualifying question can arise," the bulletin continues. "What amount of the above Btu load is removed from the product itself? Such heat loads would be highly variable and in practice would be impossible to predict. However, for good maintenance of food products involved, such products must be maintained at reasonably even temperatures. Hence, for practical purposes, the product load would have to be negligible."

Combining the two figures and coming up with 152,800 Btuh, the Tyler bulletin assumes a 16-hour operation time, and calculates that approximately 12.7 tons of heat per hour are removed from a store area by perishable refrigerators.

Tyler does not go on to insist that this total 13 tons should be subtracted from the air conditioning load from the store, because several design factors should be considered. But, the bulletin points out, this discussion is significant primarily because of experiences that have indicated that air conditioning systems installed with excess capacity have resulted in poor humidity control in stores. Also, it is Tyler's contention that if the air conditioning contractor considers these factors, he is more likely to design a proper air conditioning system which will handle the store for all of the seasons with adequate controls for such all-season use.

(To Be Continued)

REFRIGERANT-22: HERO or VILLAIN?, the popular 4-week series discussing the advantages and disadvantages of R-22, is now available in reprint form. Single copy, 25 cents; 10-49 copies, 20 cents; over 50 copies, 15 cents.

ARI Certification--

(Continued from Page 1, Col. 1)

tute following a recent section meeting.

The program will include unitary heat pumps up to 135,000 Btuh cooling capacity, but will not include reverse-cycle room air conditioners. It will closely follow, in contractual relationships, procedures, and testing of equipment, the Unitary Air-Conditioning Certification Program, which has been in operation for more than two years. However, because of the more-complicated nature of the equipment, a number of modifications have had to be made in testing requirements, it was pointed out.

Administered by ARI

Like the unitary air conditioner program, the heat pump program will be administered by ARI under the direction of the Unitary Air-Conditioner Section.

As a pre-requisite to approval of the program by the section, a revised ARI Standard for Unitary Heat Pump Equipment (ARI Standard 240-61) has just been published, Gilbreath said. The last previous revision, published in 1957, has been completely rewritten to provide a basis for the proposed certification program.

A particular feature of the new standard are the revised rating conditions, which call for standard rating capacities for both summer (at 95° outdoors) and winter (at 45° outdoors) operation, and an additional required winter condition rating at 20° outside temperature, to cover operation at lower outside temperatures than was called for in the previous version.

New Test Equipment

Another requirement before activation of the program for heat pumps is the installation of additional test equipment at Electrical Testing Laboratories in New York City, where heat pump units are to be tested under contract with ARI, just as unitary conditioners are now tested.

"However," it was stated, "the testing of heat pumps will require a longer time and a considerably increased set-up of equipment. They must be made to operate under a wide range of conditions, with possible extremes of 0° in winter to 100° in summer in areas most suitable for heat pump application.

"Some of the testing involved in a heat pump program is much more severe than for summer air conditioning only, and the additional equipment in the testing laboratory will include 'cold' rooms to simulate outside winter temperatures ranged beside 'hot rooms' simulating outside summer temperatures."

But the industry still feels, Gilbreath said, that "a heat pump certification program, as stringent in every respect as the highly-successful Unitary Air-Conditioner Certification Program, should provide an additional assurance to the public that it is getting its money's worth when purchasing these products."

Copies of the new Heat Pump Standard are available from ARI at a price of 50 cents each.

Secondary Boycott Decision--

(Continued from Page 1, Col. 3)

Sheet Metal Workers union picketed a West Virginia construction site to try to force the general contractor to cease doing business with one of its subcontractors.

The union's dispute was with the non-union roofing and sheet metal subcontractor, S. M. Kisner & Sons of Fairmont, W. Va. Kisner's firm was large enough to affect interstate commerce and come under the board's jurisdiction.

While admitting that a secondary boycott existed, the trial examiner said the law was not violated because the general contractor's volume was too small to bring him within the jurisdiction of the board.

The NLRB members unanimously agreed that such a ruling would "thwart the Congressional intent" in passing the Landrum-Griffin law.

They asserted that future cases will be decided on a broad interpretation of the law to "give the widest coverage to secondary boycott provisions."

The board ordered the union to stop encouraging employes of the general contractor to strike or refuse to work in order to force him to cease doing business with Kisner.

BHC Names Beals

NEW YORK CITY—Rixford A. Beals has been named manager of the Commercial & Industrial Div. of the National Better Heating-Cooling Council, it was announced by the association.

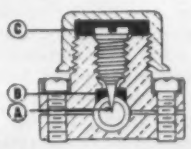
Absolutely Dependable!

THE WATSCO GOLD SEAL **LINE TAP VALVE**

Instantly pierces tubing ...to provide a permanent port for charging, discharging, and testing without refrigerant loss!

- Small, compact, low cost!
- Taps into any refrigeration line from 3/16" OD to 5/8" OD.
- Secured to tube from the top by two Phillips head screws for greater convenience.
- Engineered to fit respective size line—can't bend or crimp tubing.
- May be installed without refrigerant loss even while unit is operating.

PERFECT "THREE POINT" SEALING



A Taper of needle forms first seal
B Neoprene seat forms second seal
C Seal cap forms third precautionary seal

Use with Gold Seal Swivel Control Valve CV-1G or CV-2G.
For additional information, see your wholesaler or write Dept. N-62

WATSCO INC.
1020 EAST 15th STREET, HIALEAH, FLORIDA

APPLICATIONS UNLIMITED
Non-locking handles by NATIONAL LOCK
These new die-cast handles from National Lock are designed for refrigerators, freezers, display cases, coolers, keep-warm cabinets, ice-makers . . . or any standard application that calls for a high-quality, non-locking handle. Bright Chrome or Chrome with Baked Enamel Color. For special-application handles, have our design-engineering staff assist you. Write us.
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RATES for "Positions Wanted" $7.50 per insertion. Limit 50 words. 15¢ per word over 50.

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ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other address by actual word count. Please send payment with order.

POSITIONS WANTED

REFRIGERATION OR related field—20 years' experience on fractional to 125 ton equipment—mostly installation and service, some sales, on commercial store fixtures—the last 2½ years as field engineer for large store fixtures company. For further information contact JIM WILLIAMS, 750 Pennsylvania Avenue, Elmira, New York.

APPLICATION AND sales engineer with 10 years' experience in the field. Age 36, married, 2 years' college. Last six years as manager of air conditioning department for large retail firm in the South. Sales volume tripled during this period. Desire position with manufacturer or wholesale distributor in South or Southwest. Thoroughly familiar with service on all types of heating, cooling equipment including heat pumps and applied systems. Direct inquiries to BOX A6806, Air Conditioning, Heating & Refrigeration News.

PRODUCT DEVELOPMENT engineer (B.S.M.E.) 25 years old with four years' automotive air conditioning, product development experience is interested in securing a position with a progressive air conditioning firm in the Midwest. Willing to relocate in Michigan, Ohio, Indiana or Illinois. BOX A6807, Air Conditioning, Heating & Refrigeration News.

POSITIONS AVAILABLE

ADDITIONAL SERVICEMEN needed, commercial air conditioning and refrigeration service and installations, experienced, sober. Good salary. Steady employment. Hospitalization benefits. Give references, present salary, and experience. Our firm in business over 30 years. AARON TORCH & SONS, INC., 452 First Street, Macon Georgia, SHerwood 6-5666.

PACKAGED EQUIPMENT sales — Trane packaged equipment—residential air conditioning and heating, heat pumps, and self-contained units to 50 tons—provides a quality line for the successful salesman with experience in packaged equipment business. Substantial commissions with drawing account. Several openings in midwestern and eastern cities. Write for further details to Staff Employement Department, THE TRANE COMPANY, La Crosse, Wisconsin.

AIR CONDITIONING and heating mechanic. 30-45, experienced. Open shop, vacation and benefits. Send photo and resume to THEODORE M. WILLIAMS CO., 979 Volusia Avenue, Daytona Beach, Florida.

APPLICATION ENGINEER—required by Fedders Corporation, location—Buffalo, N. Y.—excellent opportunity for qualified graduate engineer with three years' experience in application engineering on residential air conditioning and heat pumps. Will work directly in Engineering Department preparing manuals, spec sheets and assisting field engineers on problems of installation and application of equipment. All inquiries will be held confidential. BOX A6800, Air Conditioning, Heating & Refrigeration News.

COUNTERMAN EXPERIENCED, for Florida refrigeration wholesaler, must have capability of supervising inside sales and purchasing. Send complete resume, references, salary expected. A good job opportunity with a growing concern for a capable man who wishes to live in Florida. Age not a factor. Party from Iowa who contacted us at Box A6734 please contact us again at BOX A6801, Air Conditioning, Heating & Refrigeration News.

CHIEF ENGINEER — sudden illness opens up challenging opportunity with established manufacturer of air conditioning and warm air heating equipment. The man we are looking for must be marketing-oriented and capable of complete follow-through from initial design to production. Position now open. Send complete resume, including past and present earnings. Our staff knows of this ad. BOX A6803, Air Conditioning, Heating & Refrigeration News.

AIR CONDITIONING sales engineer. Graduate mechanical engineer, experienced in sales, good references. Wanted to sell heating and air conditioning equipment for Phoenix, Arizona wholesale supply company representing top national lines. Work would be with installing dealers and consulting engineers, ninety per cent in Phoenix area. Please reply with complete resume and expected beginning income. BOX A6804, Air Conditioning, Heating & Refrigeration News.

ADVERTISING OPPORTUNITY — Eastern manufacturer needs young college graduate age 25 to 35 to take over advertising department responsibilities. Must have technical writing experience. Work includes writing and publishing technical sales bulletins, trade journal advertising, direct mail, and trade shows. Write BOX A6805, Air Conditioning, Heating & Refrigeration News.

EQUIPMENT FOR SALE

NEW, 330 York compressors, ¾ h.p., model D2448H, F22, 115 Volts with overload protector, relay, capacitors and mounting kit. Reasonable offer accepted. Detail information and compressor for inspection will be sent upon request. DIXIE-NARCO, INC., Ranson, West Virginia. Phone: Charles Town, W.Va. -938.

SEALED SYSTEMS wiring simplified —First factual condensation of basic compressor electrical circuitry in five fundamental diagrams on one big wall chart. Covers virtually all sealed systems wiring essentials of single phase air conditioner, refrigerator, freezer or remote commercial units manufactured in United States. $1.69 or 4 for $5.75 postpaid. FRIGID EQUIPMENT CO., Dept. AH&RN, 1340 St. Stephens Road, Mobile, Alabama.

NOTICE: DISTRIBUTORS, dealers, servicemen, users refrigerantion equipment—repair parts available all models Baker ammonia and Freon compressors. Also models 6B and F6B ammonia compressors. We are exclusive Baker export sales office. Manufacturers' export agents refrigeration, air conditioning and allied equipment. THE KEISER COMPANY, 155 W. 79th St., Chicago 20, Illinois.

BRAND NEW icemaker pump motor and impeller repair kits for Scotsman Carrier $18.00 at Kesco wholesalers coast to coast. Bronze replacement icemaker pumps for York Carrier $29.95. Hose connection adaptors for York Carrier $1.00. Complete line condensate pumps from 10' to 50' head, 115-208-230 volts. Catalog. KESCO, Jamaica 13, N. Y.

ATTENTION REFRIGERATION Servicemen. Send for catalog listing values in refrigeration and air conditioning parts, relays, capacitors, compressors. Savings up to 50%. WALTER W. STARR, 2833 Lincoln Ave., Chicago 13, Illinois.

INSULATING BLOW truck $3,300.00. Low mileage, 1959 model 6B59, all aluminum van body with International watercooled motor model C-106-S9J. Molly Machine Company, Supermatic Woolmaster blower. All in excellent condition. THEODORE M. WILLIAMS CO., 979 Volusia Avenue, Daytona Beach, Florida.

BUSINESS OPPORTUNITIES

FLORIDA MANUFACTURING company (automotive accessory field) offered for sale whole or in part by investment holding corporation. Excellent proven product with good location and facility. Now operating at a loss, but with distribution know-how and qualified management has large profit potential. Will consider participation or sale on attractive terms. BOX A6808, Air Conditioning, Heating & Refrigeration News.

MISCELLANEOUS

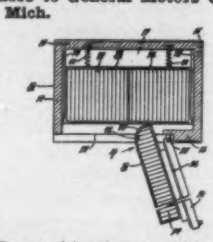
ATTENTION SERVICEMEN — More than one half million refrigeration compressors are operating with 'Chicago' replacement valve plates and seals. See your wholesaler. CHICAGO VALVE PLATE & SEAL CO., 6960 W. Grand Ave., Chicago 35, Illinois.

SERVICING AUTO air conditioners? Then you'll save time and earn more money if you are fully informed on all types of systems on the market. They're described fully in "Servicing Automobile Air Conditioners" available in four volumes covering models from 1954 through 1959. Vols. 1, 2, and 4 are $2 each; Vol. 3 is only $1. See your wholesaler or order from BUSINESS NEWS PUBLISHING CO., Dept. B, 450 W. Fort, Detroit 26, Mich.

PATENTS

Week of Feb. 28 (Concluded)

2,973,236. REFRIGERATOR SHELVING. Robert B. Hicks, Oak Park, and Edwin O. Grahn, Birmingham, Mich., assignors to General Motors Corp., Detroit, Mich.



1. In combination, a cabinet having walls defining the top, bottom, back, opposed sides and a partial front wall of a compartment therein, said partial front wall projecting away from one side wall of said cabinet toward its opposite side wall and terminating in spaced relation thereto providing an access opening for said compartment, a door hinged to said cabinet at the terminated edge of its partial front wall for closing the compartment access opening, a sectional support device within said compartment for storing articles therein above its bottom wall, said support device comprising a first section and a second section disposed in the same horizontal plane with one another and cooperating so as to be complementary to each other for providing the device with supporting surfaces occupying substantially the entire cross sectional areas of said compartment. . . .

Editor's Note: Patents described here have been selected from the "Official Gazette" of the United States Patent Office. They offer only a brief summary of each invention. In some instances only the first part of the digest is presented.

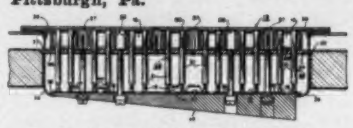
Printed copies of patents, reissued patents, and patent designs may be secured from the Patent Office; patents and reissues are 25¢ each, while designs are furnished at 10¢ each. Address orders to: Commissioner of Patents, Washington 25, D. C.

2,973,327. BONDED MOLECULAR SIEVES. William J. Mitchell, Kenmore, and Ward F. Moore, Tonawanda, N. Y., assignors to Union Carbide Corp.

1. An agglomerate comprising a crystalline zeolitic molecular sieve and a clay mineral binder, said agglomerate having been formed from a mixture into a mass and fired at a temperature sufficiently high to dry said clay mineral binder, provide a bound product, and activate said crystalline zeolitic molecular sieve, the firing temperature being below that temperature at which said crystalline zeolitic molecular sieve is structurally unstable.

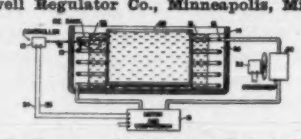
Week of March 7

2,973,627. THERMOELECTRIC HEAT PUMP. Robert S. Lackey and Jack D. Moess, Pittsburgh, Pa., assignors to Westinghouse Electric Corp., East Pittsburgh, Pa.



4. In thermoelectric heat pump apparatus, a pair of spaced parallel plates providing a heat dissipating air duct therebetween, one of said plates being formed of heat insulating material, a heat conducting structure having a portion thereof clamped between said plates and a pair of rod-like extensions projecting through said insulating plate and terminating on the opposite side thereof, and a pair of bodies of dissimilar thermoelectric material having hot and cold junction ends, said bodies having their hot ends mounted respectively on the ends of said extensions and supported thereby.

2,973,630. CONTROL APPARATUS. John P. Kriechbaum, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

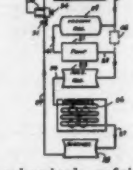


1. In a control system for controlling the size of an ice bank maintained on the evaporator coil of a refrigeration apparatus which are submerged in water, a switch for controlling the operation of the refrigeration apparatus, a pressure sensitive switch operator for operating said switch, a sensing element having a first and a second chamber separated by a flexible wall, said sensing element being attached to the evaporator coil, conduit means connecting said first chamber and said pressure operator in a closed liquid filled system so that upon the compression of said liquid a predetermined amount in said first chamber said operator causes said switch to stop the operation of the refrigeration apparatus. . . .

2,973,631. REFRIGERATED DISPLAY UNIT. Theodore E. Adkins, 1315 Huber Lane, Glenview, Ill.

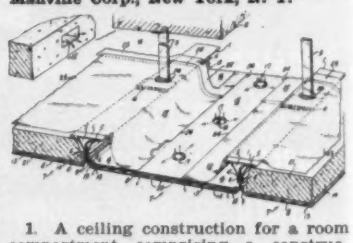
1. A refrigerated display unit for mounting on a counter having accessible upper and lower surfaces joined by a free edge, comprising a refrigerated display member for supporting articles to be displayed and refrigerated, said refrigerated display member being adapted to be positioned upon the upper surface of an associated counter adjacent to the free edge thereof. . . .

2,973,632. PORTABLE REFRIGERATED COOLER. Cecil L. Moore, St. Louis Park, Minn., assignor to Engineering & Research Lab Service Co., Indianapolis, Ind.



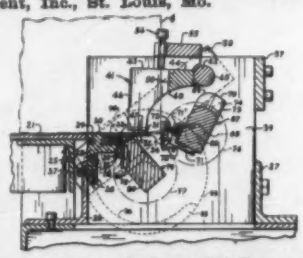
1. A mechanical refrigeration system having an evaporator and a condenser, an intermittently operated hand pump connected between the evaporator and the condenser for pressurizing the refrigerant circulating through the system subsequent to its excursion through the evaporator, means cooperating with the condenser for removing heat from the refrigerant, a control for metering refrigerant into the evaporator, and kinetic energy storage means including a vacuum reservoir tank connected between the evaporator outlet and the low pressure side of said pump and a pressure reservoir tank connected between the high-pressure side of said pump and said condenser inlet. . . .

2,973,703. AIR REGULATION MEANS IN A SOUND ABSORBING AND VENTILATING CEILING. William A. Jack, Hampton, N. J., assignor to Johns-Manville Corp., New York, N. Y.



1. A ceiling construction for a room compartment comprising a construction providing a true ceiling of said room compartment, a plurality of juxtapositioned pans, means to suspend the pans from the true ceiling so as to form a viewable false ceiling with a plenum chamber formed between the two ceilings, each of said pans having perforations in a major face thereof, an air-impervious paper-thin septum situated within one of the pans, means to space the septum from the subjacent major face of its pan and related to its pan so as to provide a compartment beneath said septum, pads seated within the other juxtapositioned pans. . . .

2,973,796. CLEAT FLANGER FOR SHEET METAL DUCTS AND THE LIKE. Charles P. Engel, Columbia, and Bonard V. Mace, Alton, Ill., assignors to Engel Sheet Metal Equipment, Inc., St. Louis, Mo.



1. Apparatus to form 180° flanges on margins of sheet metal, comprising work support means, means providing an edge and parallel upper and lower surfaces adjacent thereto about which a 180° flange may be turned, means

From the Files of the News

25 years ago . . .

To meet a wider range of air conditioning requirements, York Corp. has added several new vertical-type year-round conditioners to its line of standard equipment; these units are designed for department store, restaurant, hotel, and specialty shop applications. . . . The Trane Co. has issued a booklet describing the use of its "Climate Changer" systems for use in residential air conditioning. . . . Westinghouse announced that it is making shipments of its new large hermetically sealed condensing units for air conditioning jobs.

"There are no 'bona fide' air conditioning installations in Singapore, although 37 air circulation systems have been sold by one firm," reports Editor George Taubeneck from his around-the-world trip. He also reported that the Levant Fair in Tel Aviv has exhibits from 19 countries, with U.S. refrigeration exhibits a tremendous highlight. . . . The American Medical Association wrote the NEWS requesting a list of air conditioning manufacturers because "This office receives inquiries concerning air conditioning devices."

10 years ago . . .

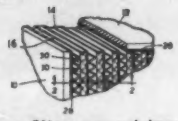
What is thought to be the first completely air conditioned public school in the nation has been built at McKittrick, Calif. for grammar school students. The $28,000 air conditioning system not only provides "comfort cooled" education facilities, but also an air conditioned community center for the entire sparsely populated county. . . . Through proper application of air conditioning and lighting, greenhouses can expect faster and better plant growth—an "enormous" increase in production, the ASRE was told. With draftless distribution, use of activated charcoal filters to absorb harmful gases, and an electrical precipitator to aid in cleaning the air, a continuous growing cycle can be expected.

"Public sentiment against industrial air pollution has reached the point where the expense involved to prevent such pollution must be considered by the process plant owner as the price that society demands of him for permission to operate his plant," a Johns Hopkins professor told an ASME section meeting. If every reasonable measure to abate the discharge of objectionable products into the atmosphere is not taken voluntarily, it will be forced by more restrictive legislation, the speaker warned.

The "world's most modern and newest brewery," the $20 million Anheuser-Busch plant erected in Newark, N. J., employs "Freon" turbo glycol brine cooling systems installed by York Corp. . . . "Let's not jump to conclusions as to the refrigerant, type of compressor, or cycle to be used" in achieving low temperatures, E. R. Michel of Worthington Corp. stated at a recent ASRE meeting. . . . A super-deluxe Kroger supermarket in Normandy, Mo. is equipped with four Curtis 7½-ton packaged air conditioners while a fifth conditioner maintains a constant 55° temperature in the pre-wrapped meat department.

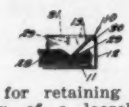
whereby to clamp a sheet of metal onto the work support means in a position wherein its margin projects over said edge, and to release same, means presentable at a flange-spacing distance from said edge whereby to gage the projection of such margin prior to flanging. . . .

2,973,828. FILTER. Paul M. Engle, Syracuse, N. Y., assignor to Cambridge Filter Mfg. Corp., a corporation of New York.



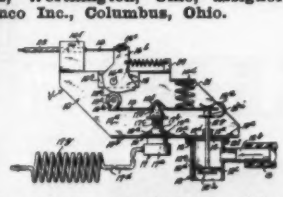
1. A gas filter comprising a frame, plaited filter media in porous sheet form and through which gases pass at a relatively slow rate disposed in said frame, void producing spacers for said plaits disposed in the upstream side and downstream side thereof defining spaces for gas to collect prior to and after passage through the media, said spacers having active absorbent surfaces for the treatment of gas awaiting passage through said filter medium.

2,973,831. FILTER FRAME. Verner E. Sprouse and Lowell E. Sprouse, both of 1804 E. 22nd St., Columbus, Ind.



A device for retaining a marginal edge portion of a loosely arranged filtering medium comprising a channel member open along one side and having a base leg; an enclosing leg disposed approximately at right angles to the base leg; and a presser leg integral with and bendable from along, and substantially longitudinally coextensive with said enclosing leg, and extending in spaced relation from and over said base leg; said presser leg having a continuous straight line outer free edge; and a plurality of integral, longitudinally spaced apart barbs extending approximately at ninety degrees from said presser leg and directed toward said base leg; each of said barbs being spaced from but adjacent said free edge and the points of the barbs terminating in aligned points; said filtering medium edge portion resting on and along said base leg; and upon bending said presser leg toward the base leg. . . .

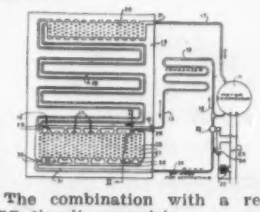
2,973,903. TEMPERATURE CONTROL APPARATUS. George P. Sallaris, Worthington, Ohio, assignor to Zanco Inc., Columbus, Ohio.



A control apparatus comprising a sheet metal frame plate having one edge portion turned outwardly to form a flange projecting laterally from one surface thereof and having a portion adjacent to the edge opposite said flange offset from said one surface of said plate and parallel to said plate proper, a valve mechanism attached to said flange adjacent to one end thereof and extending beyond said plate. . . .

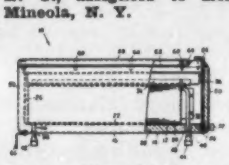
Week of March 14

2,974,498. REFRIGERATION APPARATUS. Herbert A. Ehrenfreund, Longmeadow, Mass., assignor to Westinghouse Electric Corp., East Pittsburgh, Pa.



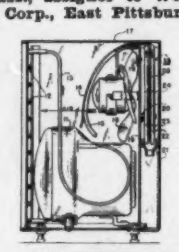
1. The combination with a refrigerating circuit comprising a compressor, a condenser, a flow impeding device and an evaporator having an inlet and an outlet, of an accumulator in said circuit at the inlet of said evaporator, said accumulator being adapted to collect a part of the liquid refrigerant conveyed to said evaporator, and means for bypassing the flow impeding device of said circuit and for conveying warm refrigerant gas to said evaporator to effect defrosting of the evaporator. . . .

2,974,499. REFRIGERATOR OR COOLING DEVICES FOR FLUIDS. Angelo S. Sinatra, Massapequa Park, Edward J. Dziedzinia, North Massapequa, and Ralph R. Pecoraro, West Islip, N. Y., assignors to Ref Mfg. Corp., Mineola, N. Y.



2. A fluid cooling device comprising inner and outer nested shell members, means between said shells to insulate the same, a fluid tank in said inner shell, a refrigerant-receiving tray in said inner shell extending across the top of said tank, a fluid inlet connected with the lowermost portion of said tank, a fluid outlet connected with said tank to exhaust fluid from the topmost portion thereof, openings defined in said shells through which said fluid inlet and outlet respectively may extend, said openings being greater in size than the respective fluid inlet and outlet extending therethrough whereby the cooling gases produced by a refrigerant received in said tray may escape to cool the fluid inlet and outlet, and a door hingedly movable to permit access to said tray.

2,974,500 AIR CONDITIONING APPARATUS. Carl E. Sholtes, Springfield, Mass., assignor to Westinghouse Electric Corp., East Pittsburgh, Pa.

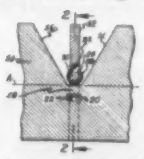


1. In a dehumidifier, an outer casing having an air inlet and an air outlet, said air inlet being located in a wall of the casing other than the bottom wall and being open and unrestricted for the free passage of air therethrough, said inlet comprising at least one opening that is sufficiently large to permit the hand of an adult person to pass therethrough, a propeller fan disposed within said casing behind said inlet, a refrigerant condenser disposed within said casing in the path of air issuing from said fan, and a refrigerant evaporator mounted on the outer surface of the wall of said casing in which said air inlet is located. . . .

2,974,580. ADJUSTABLE AIR OUTLET. Edward C. Zimmerman and Peter Alekna, Chicago, Ill., assignors to Patent License Corp., Chicago, Ill.

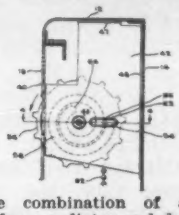
1. An adjustable air outlet comprising a spherical housing having a passageway therethrough, a ring-like member having an opening therethrough with arcuate surfaces mounting said housing for universal movement, a nozzle having a tubular portion mounted in said passageway and an annular portion of larger diameter extending outwardly of said housing, shoulder-like means forming a part of said annular portion and engaging said housing adjacent the outer edge of said passageway, a valve member in said housing and having an annular portion co-axial with the tubular portion of said nozzle, the co-axial annular and tubular portions being telescoped and provided with interengaged cooperating threads formed therein. . . .

2,974,581. LOUVER DEVICE. Adam D. Goetti, Phoenix, Ariz., assignor to McGraw-Edison Co., Elgin, Ill.



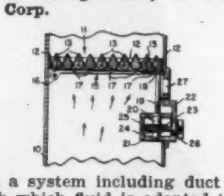
1. In a louver device the combination of: a first slat; a second slat intersecting said first slat at an angle thereto; each of said slats having a pivot portion disposed on an axis longitudinally of the respective slat; each slat having an opening therethrough adjacent its respective pivot portion; and bearing means having first and second pairs of opposed spaced fingers; said pivot portions of said first slat engaged between said first pair of spaced fingers, said pivot portion of said second slat engaged between said second pair of spaced fingers, said first pair of spaced fingers extending in an opposite direction from said second pair of spaced fingers, said fingers of said first and second pairs movable into and out of said openings in said first and second slats adjacent their respective pivot portions when said slats are pivoted about the axes of said pivot portions.

2,974,582. REEL DAMPER CONTROL. Henry M. Rybold and Oswald J. Wiggins, La Crosse, Wis., assignors to The Trane Co., La Crosse, Wis.



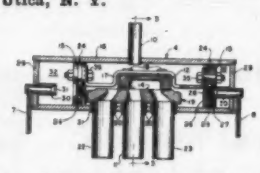
1. The combination of a pivoted damper for a radiator and damper control means for raising and lowering said pivoted damper, said control means comprising support means adapted to be secured to a radiator casing, a damper knob rotatably connected to said support means, means operably associated with said damper knob to urge said damper knob into frictional engagement with said support means, said damper knob having a surface bearing on said support means, said surface having a spiral groove therein, and spiral groove having an arc length greater than 360°. . . .

2,974,680. VALVE. Joseph W. Kreuttner, North Tarrytown, N. Y., assignor, by mesne assignments, to Buensod-Stacey Corp.



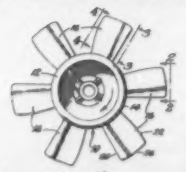
1. In a system including duct means through which fluid is adapted to flow, a fluid flow regulator including a frame member stationarily mounted within said duct means; spaced louvers mounted on said frame member; a second frame member movably mounted within said duct means; louvers mounted on said second frame member in spaced staggered relation to the louvers on said stationary frame member and adapted to intermesh with corresponding louvers on said stationary frame member; and means for moving said second frame member toward and from said stationary frame member along a path that renders said intermeshing louvers progressively variably effective.

2,974,682. REVERSING VALVE FOR HEAT PUMPS. Allen Trask, Utica N. Y., assignor to International Heater Co., Utica, N. Y.



1. A refrigerant flow reversing valve for use in a refrigeration system comprising a cylindrical housing, a valve seat unit inside said housing having three ports and three individually associated annular collars in communication with respective ones of said ports, a reversing valve connecting tube ending inside each of said collars, said annular collars extending through the wall of said housing and being attached thereto and to said connecting tubes with solder, a D valve slide seating on said valve seat unit and arranged to selectively connect each outside port with the center port, and piston means operable by the pressures within said cylindrical housing for selectively positioning said D valve slide.

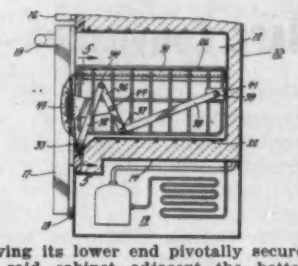
2,974,728. FAN CONSTRUCTION. Chester F. Culp, Marshalltown, Iowa, assignor to Lennox Industries, Inc.



1. A fan construction comprising a center hub having a longitudinal axis of rotation and a plurality of peripherally spaced blades extending radially outwardly from said hub, each of said blades being characterized by the center of gravity points of successively radially outward sections, taken in planes parallel to the hub axis of rotation and at right angles to a radial reference plane, from root to tip lying in a common radial plane but in successively forwardly disposed transverse planes relative to the direction of discharge flow, and said sections of each blade being further characterized by a forward rake at the leading edge for effecting convergent discharge flow toward a forward point on the projected hub axis.

2,975,012. REFRIGERATING APPARATUS. Wesley P. Thull, Detroit, Mich., assignor to General Motors Corp., Detroit, Mich.

4. In combination, a cabinet having a compartment therein provided with an opening, a door mounted on said cabinet for movement with respect thereto normally closing the compartment opening, a food support slidably supported within said compartment, means connecting said food support to said door for movement thereby part way out of said compartment through its opening upon moving the door open and back thereinto upon moving the door closed, said means comprising a linkage mechanism including a first link



having its lower end pivotally secured to said cabinet adjacent the bottom front portion of said compartment. . . .

(To Be Continued)

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NAPC Convention--

(Continued from Page 1, Col. 4)

try practice, this half-baked apprentice with his two years of post-high school training, would first assist the engineer or designer in the plant, then go out to the jobsite when he would actually install, maintain, and repair the equipment.

"He would not, of course, ever come down to the level of a skilled journeyman, though he might be made a foreman. By whom would he be employed?—that is a good question.

". . . .A new type of national agreement is as equally available to NAPC contractors as to any other type. It is called the 'project agreement for maintenance by contract.'

"It is a joint venture of 13 building trades unions, including the UA, which have declared their willingness to negotiate and sign a joint agreement with any contractor who can secure a contract or a firm commitment for the continuous maintenance of any industrial or commercial facility.

"It would be suitable even for some NAPC members who could secure a contract calling for the employment of more than one building trades craft."

Test Valance Cooling

A combined valance cooling system and baseboard radiation heating could prove to be one to put hydronics in the year-round residential comfort picture, Prof. Warren Harris of the University of Illinois told the convention.

The Institute of Boiler & Radiator Manufacturers research program will study such a system in its tri-level research house this year, he said.

In the past year, he said, the project had tried cooling and heating by valance system—where chilled and hot water coils are run behind valances just below ceiling level.

This provided excellent results on cooling but raised some problems on heating, he said.

"There is not a constant relationship between the size of summer and winter loads," Harris explained. "Therefore, the system will not necessarily stay in balance during both seasons."

He said researchers noted that drafts across the floor of the living room which contained large glass areas, temperatures near the floor were cooler in winter, and cost of operation was somewhat higher than for straight baseboard heating.

Yet, he asserted, "the valance system is one of the best hydronics system ever tested."

Fan Coil Standard Coming

Robert E. Ferry, general manager of I-B-R, informed the plumbing contractors that a testing and rating procedure for chilled water fan-coil units will be issued shortly as a standard by the Air-Conditioning & Refrigeration Institute.

I-B-R, ARI, and the Air Moving & Conditioning Association have had a joint committee working on the procedure for the past year. Their work is practically completed, he said.

I-B-R also expects to publish soon a booklet of I-B-R ratings for commercial finned tube radiation. It will cover several thousand combinations of heating elements and enclosures.

Two Groups Join CSI

In the area of achieving improved conditions in plans and specifications, Atlanta and Miami associations have joined the Construction Specification Institute, an architectural organization, of which the mechanical contractors have members participating.

In Atlanta the C.S.I. has submitted to the American Institute of Architects its recommendations for revision of the present A.I.A. general and special conditions for adoption in all specifications.

These would do away with "killer clauses" such as hold harmless insurance; incorporates the 5% retainage after 50% of a job is completed; and eliminates ambiguous catch-me-all sections.

Set 20 Schools In '62

Hilda Eisenhardt, assistant general manager of I-B-R, announced that 20 training schools will be held during the first six months of next year. Dates for the three-day schools on figuring hydronics heating have not yet been set, she said.

Schools will be held in Boston; Hartford and Stamford, Conn.; Binghamton, Long Island, Poughkeepsie, and Troy, N. Y.; Newark, N. J.; Harrisburg, Philadelphia, and Pittsburgh, Pa.; Columbus, Ohio; Indianapolis; Chicago and Tri-Cities, Ill.; Kansas City, Mo.; Bristol and Norfolk, Va.; Charlotte, N. C.; and Louisville, Ky.

Briggs New President

New officers for the year starting July 1 are G. Allen Briggs of Oak Park, Mich., president; C. D. Brownell of Champaign, Ill., vice president; Roland P. Sornsin of Fargo, N. D., second vice president; Carl N. Finley of New Orleans, treasurer; and W. Wilbur White of Detroit, secretary.

Mohawk Cabinet Fire Damage over $100,000

GLOVERSVILLE, N. Y.—A fire at the Mohawk Cabinet Co. plant caused damage estimated by a company official as exceeding $100,000.

Chief Lloyd Mulligan of the Berkshire Volunteer Fire Dept. said electrical equipment in a storage area, particularly harnesses and temperature controls for the company's products, was ablaze. Large quantities of unfinished products were destroyed due to damage from smoke, water, and flames, Chief Mulligan was quoted as saying.

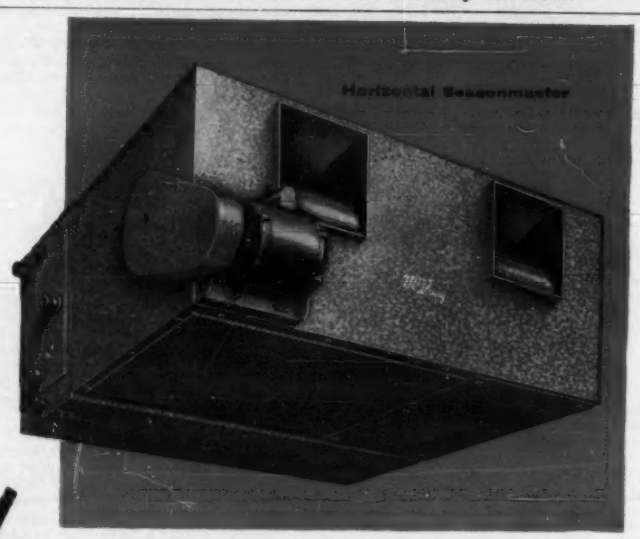
Built in 1958, the one-story plant was designed specifically for the manufacture of ice cream and dairy cabinets.

Wesco To Offer Free Consultation

PORTLAND, Ore. — Formation of a new heating and air conditioning consulting service department by Wesco Div. of Northwest Foundry & Furnace Co. has been announced by W. R. Pindell, general manager.

Heading the unit will be Edmund F. Kugel, who was associated with Montag Furnace Co., Portland, for about 40 years, as installations superintendent for more than 20 years before becoming wholesale sales manager for Montag.

The new service will provide consultation without charge to architects and engineers and to more than 100 Wesco dealers in the Pacific Northwest regarding the firm's new central, forced air electric furnace as well as oil, gas, and solid fuel heating, Pindell said.



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